Public Utilities

FORTNIGHTLY

June 20, 1940

PUBLIC UTILITIES REPORTS, INC.
PUBLISHERS

"YOU'RE LUCKY, MR. WATTS!"

"WHAT do you mean, lucky?" thundered Amos Watts, President of North-South Utilities.

"I mean *we're* lucky that you picked this time to play up Silex Glass Coffee Makers."

"Why, Simpkins?"

"National advertising, Mr. Watts. On the theme—'GIVE THE BRIDE THE GIFT SHE WANTS!"

"Say, that's a line you might plug."

"And there's something else."

"What's that?"

"Free mats, Mr. Watts. And free displays and bill enclosures."

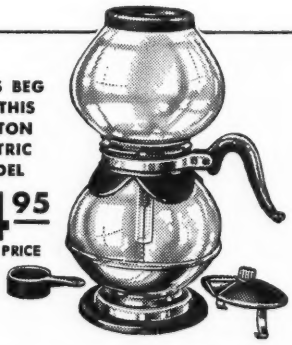
"Well . . . what's stopping you? *Orde* them."

"Yes, Mr. Watts. But I still think we're lucky."

"How's that?"

"Because Silex is the only glass coffe maker with a Self-Timing Stove. And it's the Self-Timing Stove that's responsible for *a good cup of coffee every single time.*"

"You've got something there, young Simpkins. And figures prove that *every time you sell a Silex Glass Coffee Maker* you're likely to add 87 KWH to the load."



BRIDES BEG FOR THIS BRETTON ELECTRIC MODEL

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RETAIL PRICE

FIGURES PROVE . . .

. . . that waffle irons add only 60, toasters add only 30, mixers add only 10—*but every time you sell a Silex you step up your load an average of 87 KWH!*

. . . that Silex is the *best known, best recognized, most wanted* brand of glass coffee maker on the market!

PYREX BRAND GLASS USED EXCLUSIVELY

Genuine SILEX GLASS COFFEE MAKER

TRADE MARK REGISTERED U.S. PAT. OFF.

THE SILEX COMPANY . . . HARTFORD, CONNECTICUT

Creators of the Glass Coffee Maker Industry

Editor—HENRY C. SPURR
Associate Editors—ELLSWORTH NICHOLS, FRANCIS X. WELCH, NEIL H. DUFFY
Financial Editor—OWEN ELY

Public Utilities Fortnightly

VOLUME XXV *June 20, 1940* NUMBER 13

Contents of previous issues of PUBLIC UTILITIES FORTNIGHTLY *can be found by consulting the "Industrial Arts Index" in your library.*

Advertising Section

¶ *This magazine is an open forum for the free expression of opinion concerning public utility regulation and allied topics. It is supported by subscription and advertising revenue; it is not the mouthpiece of any group or faction; it is not under the editorial supervision of, nor does it bear the endorsement of, any organization or association. The editors do not assume responsibility for the opinions expressed by its contributors.*

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Pages with the Editors

DESPITE the indisputable demonstration by political experts that the whole thing is just a fantastic impossibility, and notwithstanding other comment ranging from cynicism to astonishment, Wendell L. Willkie continues to be spoken of very seriously as a Republican presidential candidate. Just why this mysterious upheaval of all natural political laws should take place during these troubled times is only the crowning puzzle in a series of puzzles which have followed in the wake of the incredible Hoosier.

IF some years ago, when the wounds left from the struggle over the Holding Company Act were still fresh and when the politicians still had the entire public utility industry over the barrel, one had asked any political observer worth his salt to select a person "least likely to succeed" in the race for presidential candidacy, it is quite likely he would have answered, "A public utility executive." If, during that same period when H. L. Mencken made his famous remark about the Republicans being able to elect a Chinaman, someone had asked him, "How about a utility magnate?" the cocky sage of Baltimore would probably have hesitated.

AND yet here we are a bare fortnight away from the Republican national convention for 1940 and Wendell Willkie (by the grace of stockholders in meeting assembled, president of the Commonwealth & Southern Corporation), 1932 supporter of Franklin D. Roosevelt, canters down the back stretch as a leading "dark horse" possibility for the Republican presidential nomination as the result of a candidacy which emerged solely from amazing personal appeal.

HERBERT COREY

Is the Willkie "candidacy" born of a widespread yearning for common sense in government?

(SEE PAGE 771)

ONLY recently Dr. Gallup's handy handicapping device had the utility stable entry in fourth place for the Republican stakes and still pulling up. Our veteran Washington correspondent, HERBERT COREY, who has carefully watched this Willkie boom grow from the time it was only a cinder in the eye of Attorney General Bob Jackson, endeavors to explain this political phenomenon in the leading article in this issue.

RILEY E. ELGEN

The Washington Plan is not fool proof; it needs careful and constant supervision.

(SEE PAGE 787)

ALTHOUGH the problem is more than a half-century old, utility regulators still struggle with the difficulty of rewarding utility management according to its just deserts without involving discrimination. Probably the most successful device which has been used to reward efficient management is the "sliding-

WHY NOT USE DUCTS THAT...

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concrete envelope is eded when J-M Transite nduit is used under- round or in exposed loca- ons. This extra strength eans substantial savings t the start. If a casing is specified, thinner walled Transite Korduct saves material costs. And long, light lengths of both Trans- ite Conduit and Korduct speed up assembly.

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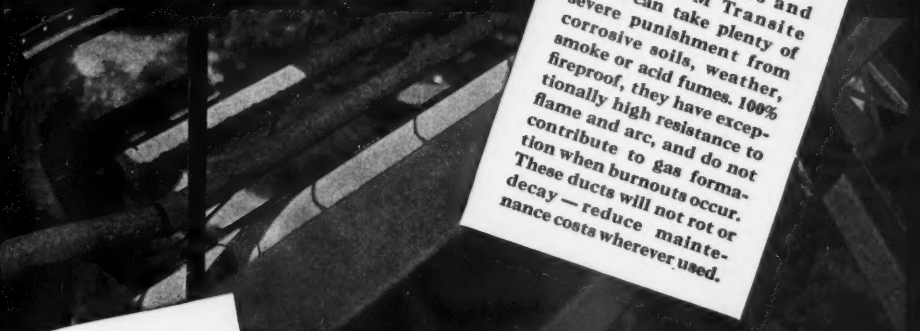

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scale, profit-sharing" arrangement originally imported from Great Britain. The blue ribbon exhibit of the success of this device is the celebrated Washington Plan, which was installed in the capital city in 1924 and has been producing substantial annual electric rate reductions ever since.

BUT there have been other and less successful attempts at sliding-scale regulation in the United States. The Detroit Plan, a variation of the Washington Plan, used for gas rates in the motor city, recently collided with a local political feud and was submerged. Boston abandoned the sliding scale in 1926 after twenty years of indifferent application, and a somewhat similar experiment in Dallas has not been heralded as an outstanding success.

WHY then does the Washington Plan continue to gain added luster with each passing year? Some critics say that the city of Washington had a head start because the local utility companies agreed on a basic rate valuation—a formidable hurdle which has not been surmounted so successfully elsewhere. Others say the city of Washington has had certain characteristics which have been particularly adaptable for utility rate reductions during the years in which the Plan has been in operation. Still others say that the Washington Plan has been successful because it has had the benefit of continuous and diligent supervision of a high-calibered commission, as distinguished from other similar experiments which languished for want of care.

IN this issue (page 787), RILEY E. ELGEN, chairman of the public utilities commission of the District of Columbia, gives us a complete discussion of why, in his opinion, the Washington Plan has been such an outstanding success. This article contains supporting data which have never appeared heretofore in the considerable literature on this interesting regulatory experiment. The author of this article was born in Maryland and educated at St. John's College in Annapolis (B.S., '03), beginning his career as an engineer. He served as valuation expert for the Interstate Commerce Commission for many years before joining the District of Columbia regulatory board in 1932.

IN modern warfare, it seems that it is the civilian population and industrial enterprise that are called to the colors long before fighting troops are actually mobilized. Feats of the German army were made possible only by the 70-hour week and other privations of the German people toiling in plane, tank, and munition factories several years before the European war was declared last fall.

Now that America finds a pressing need for stepping up her national defense, we likewise hear the Washington bugles blowing for industry to "fall in," even though the threat of actual belligerence for America is not in the immediate prospect. T. N. SANDIFER, Washington journalist and former White House correspondent for International News Service, analyzes the part utilities will play in the present program. (See page 779.)

T. N. SANDIFER

Now is the time for all good utilities to come to the aid of their country.

(SEE PAGE 779)

EVEN state commission regulation of utilities is affected by the impact of the rearmament program. This is evidenced in the declaration recently made to President Roosevelt by Harry Bacharach, president of the National Association of Railroad and Utilities Commissioners and head of the New Jersey commission. "Where national interests are at stake," he said, "the state commissions know no state lines." (See page 818.)

AMONG the important decisions preprinted from *Public Utilities Reports* in the back of this number, may be found the following:

THE Utah Supreme Court, in reviewing a determination of the commission that it had jurisdiction over nonprofit electric coöperative associations serving only their members, considers the various tests of status of public utilities. (See page 129.)

THE Montana Supreme Court, in reviewing a commission order reducing electric rates, considers the various theories for rate making as well as the various factors affecting a rate base. (See page 151.)

THE next number of this magazine will be out July 4th.

The Editors

These Are Records . . . Crumbling Ashes After A Utilities Record Building Burned

Not merely old papers were destroyed hen fire struck a New York utility October 1939. Included were fixed property ords, vouchers, cancelled checks, meter formation. Two years of work went up in oke when the company's continuing prop- ty data were burned.

Once more tile walls and concrete floors iled to save inflammable paper. Only 25% f the salvaged documents were legible ough to be copied.

Don't duplicate this costly experience. Appraise the worth of the safe-equipment now "protecting" your record assets. Do it at once—while they're intact. Precautions you take may prevent a crushing loss.

Remington Rand will help with your analysis, will lay out a definite program, will specify record protection equipment precisely certified for the value of your records and the hazards they face. Get in touch with our nearest branch. Write or 'phone today.

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In This Issue

In Feature Articles

In Financial News

In What Others Think

In The March of Events

In The Latest Utility Rulings

PREPRINTS FROM PUBLIC UTILITIES REPORTS

Various regulatory rulings by courts and commissions reported in full text, pages 129–192, from 33 PUR(NS)

Remarkable Remarks

"There never was in the world two opinions alike."
—MONTAIGNE

GEORGE L. CULLEN
Sales manager, The Harrisburg Gas Company.

"A company is known by the men it keeps!"

EDITORIAL STATEMENT
Forbes.

"Too many regulators are becoming strangulators."

THOMAS E. DEWEY
New York District Attorney.

"I favor the St. Lawrence seaway and always have."

TOM SCULLY
Retail Sales Promotion, Philadelphia Electric Company.

"Even the geysers that spout hot water in our national parks are gas heated . . . "

EDITORIAL STATEMENT
Industrial News Review.

"Labor's worst enemy today is Federal spending and its allied evils, debt and taxation."

WENDELL L. WILLKIE
President, Commonwealth & Southern Corporation.

"Just as business fought against regulation, so government today resists every effort to curb its authority."

ELIOT H. SHARP
Editor, The Investment Dealers' Digest.

"Administration of the Utility Act and the Securities acts by the same body is bound to result in embarrassment to that body."

BENJAMIN MARSH
Director, Peoples' Lobby.

"Every major mechanized nation in the world today, except America, is operating its economy under vigorous government control."

DAVID LAWRENCE
Editor, The United States News.

"The death sentence provision of the utility law is the first really far-reaching attack on the American system of private ownership ever made."

W. ARTHUR SIMPSON
Director of Old Age Assistance for State of Vermont.

"Working for government and living off government has become the great American profession and is continually being promoted, developed, and expanded."

H. W. PRENTISS, JR.
President, National Association of Manufacturers.

"Reasonable umpiring on the part of government is right and proper, but government umpiring is quite a different thing from national economic planning."

GEORGE A. DONDERO
Representative from Michigan.

"There is no comparable area on this earth that includes so many of the requisite qualifications for a master project as the Great Lakes region of the United States."

H. OBERMEYER
Assistant vice president, Consolidated Edison Company of New York, Inc.

"The average electric bill represents less than 1½ per cent of the average household budget, but it generates 90 per cent of the emotional rancor of the average householder, if you judge by the speeches of some political commentators."

EDITORIAL COMMENT
Nashville Banner.

"Until Civil Service regulations are more completely operative in *all* agencies of government and the public service, the administration of these cannot be assured of that high degree of efficiency it should command, considering what it costs."

CHARLES J. ZIMMERMAN
President, National Association of Life Underwriters.

"Our concept of personal freedom rests on a tripod, of which one leg is representative of democracy; another, civil liberties; and the third, private, free enterprise. You cannot undermine one of these legs without having the whole structure crumble."

LEON PHILLIPS
Governor of Oklahoma.

"From the control of production of oil it is but a simple step to the control of refining, control of transportation, and control of marketing. Partial control of one branch of an industry, once established as a policy, leads inevitably to control of the entire industry."

EDITORIAL STATEMENT
The Nation.

"Not since those remote pre-war days when the big-business press was sure that the ICC would prove the ruination of the railroads has a regulatory body been subjected to such vicious and misleading attacks as those now being directed against the National Labor Relations Board."

PAUL V. McNUTT
Federal Security Administrator.

"We are not greatly menaced here by the danger of invasion by the legions of Hitler or of Stalin. Our danger is that we may continue along the road of permitting the centralization of controls in business and finance until the nation is driven by poverty and despair to accept a dictator of its own. It could happen here."

JEROME FRANK
Chairman, Securities and Exchange Commission.

"In connection with private enterprises, we lawyers are acknowledged experts in adjustment. Too often, however, some lawyers fail to employ that sure skill in their dealings with government. That is a dangerous attitude. In a period of rapid social change, that is bad medicine for our democracy. Adjustment, resilience, the art of wise compromise—those tools of the lawyer's trade need to be generously applied . . ."

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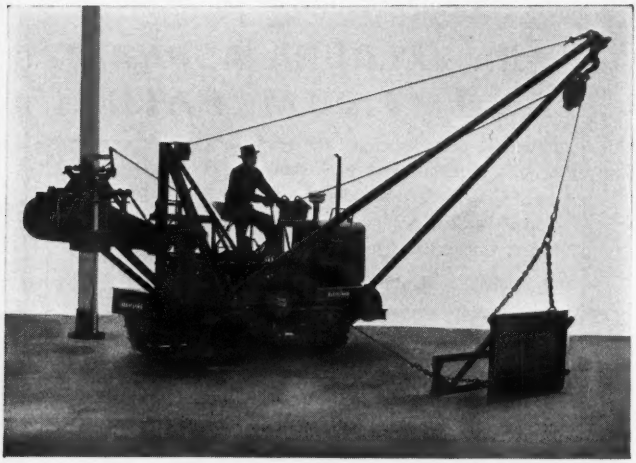

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3

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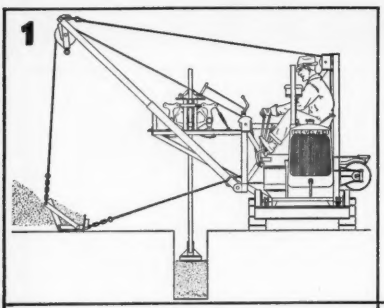
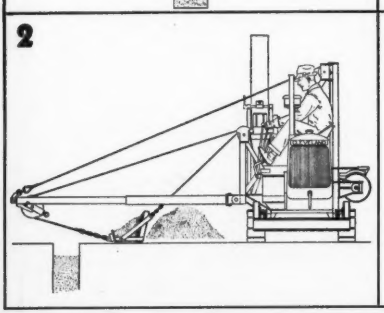
THE CLEVELAND-Model 80

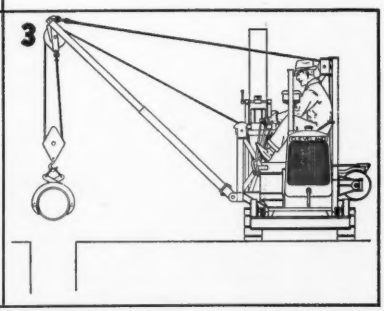


1. TAMPS—With the Model 80 you can replace as much or more dirt than was taken out. Machine operates astraddle of trench or 3½ feet from edge.

2. BACKFILLS—With the Model 80 you can work from either side of the trench either pulling in, or pushing in dirt.

3. LAYS PIPE—Boom and cable winches of Model 80 have been made extra strong permitting handling and laying pipe, pulling sheathing and doing other light crane operations.





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Made especially for machine bookkeeping in Buff, in subs. 24, 28, 32 and 36, and in White, Blue and Pink, subs. 32. Has 50% rag content for strength and durability and a perfect surface for smudge-proof typing, easy filing, clean erasing; and a one-way grain direction that makes forms stand straight in trays or binders. Moderately priced.

WESTON'S MACHINE POSTING *Index*

Made in Buff, White, Blue, Ecru, Salmon and Pink in 180M, 220M, 280M and 340M—basis 25½x30½. Has a ledger finish that takes typing clearly; will not smudge and can be erased repeatedly. Extra strength and snap make index tabs stand up without bending or tearing.
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He also has the assurance that these new designs are practicable. They have been tried out and are working—reliably and satisfactorily. For example, there are now in operation, 26 B&W Boilers with Two-Stage Furnaces, one of which has been in service since 1930. Five B&W Open-Pass Boilers are in regular service in two plants—two in operation since March 1937. Eight B&W Radiant Boilers are in operation—two for over a year. Over 240 Integral-Furnace Boilers are in operation. The oldest has been in service since 1933.

Opportunities for the power engineer are therefore greater today than ever, because of this new steam-generating equipment—of proved reliability—that is backed by a company with an established policy of protecting the users of its products.

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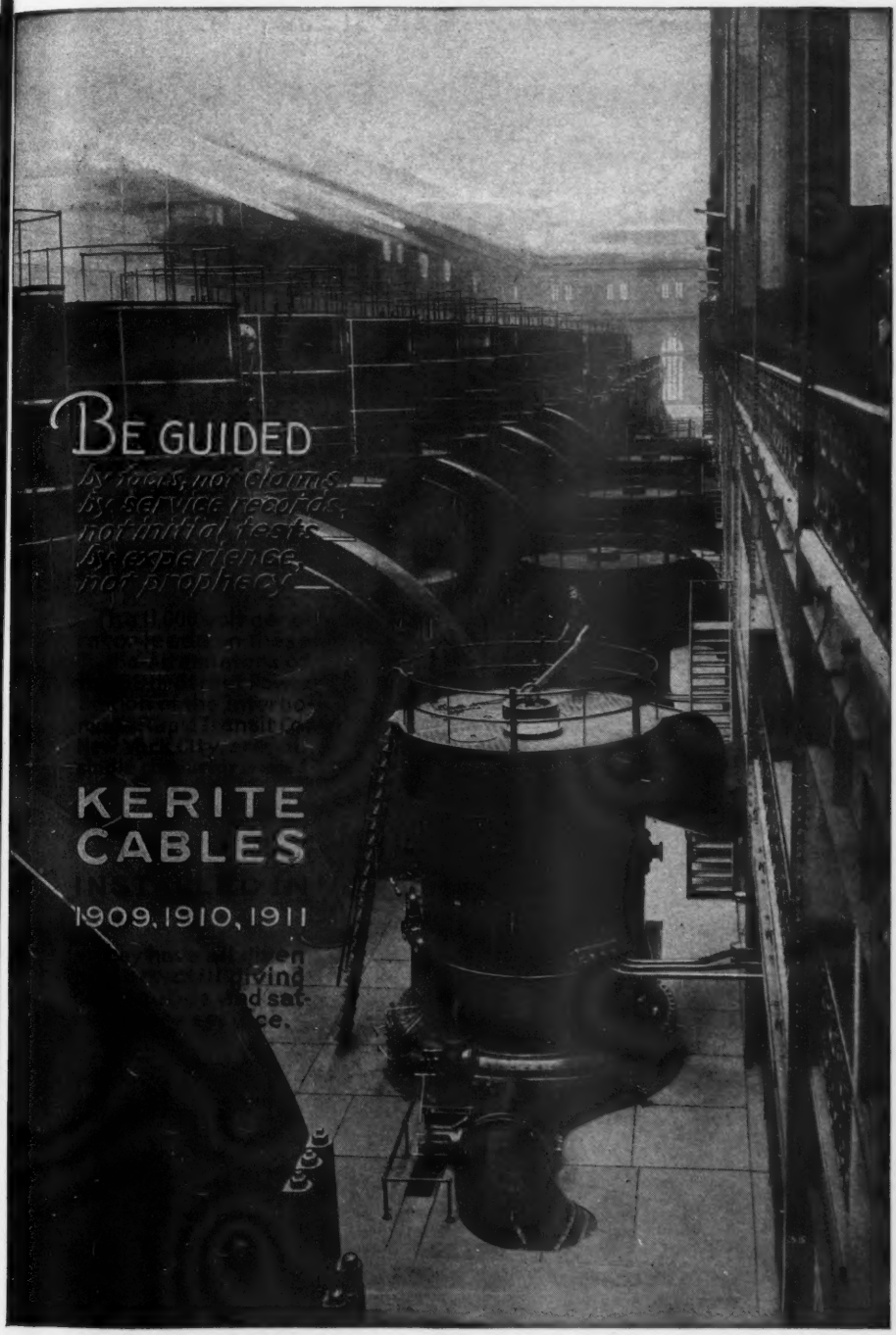

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THEY CAN SAVE money on YOUR job, too—these *Job-Rated* CAB-OVER-ENGINE trucks! Now available in *both* 2-ton and 1½-ton capacities—they're powered with exactly the *right* Dodge truck engine to deliver *top* performance, *maximum* economy! Throughout—they're built and "sized" for long, dependable, cost-cutting operation. Big, wide doors and easy step-in make a great "hit" with drivers! Controls, too, are within easy reach—exactly where you've been accustomed to find them. See your Dodge dealer today.

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International Harvester's new small TD-6 Diesel TracTracTor is the best news in a long time for users who need the powerful versatility of a small crawler with the fuel economy of International's *full* Diesel engine.

The TD-6, smallest of International's four new Diesel crawler tractors, is only 104 inches long . . . a flexible, easily maneuvered unit for working in close quarters. It gets its smooth-flowing power from the International *full* Diesel engine. That means operating costs are cut right from the start. You save on fuel; you get the added International quick-starting feature.

Fast gear shifting, five forward speeds, operator comfort, accessible controls, and adjustable levers and pedals are other features that combine to make the TD-6 the outstanding crawler value in its class. See the nearby International industrial power dealer or Company-owned branch for information on the TD-6 and its three larger brothers in the International line.

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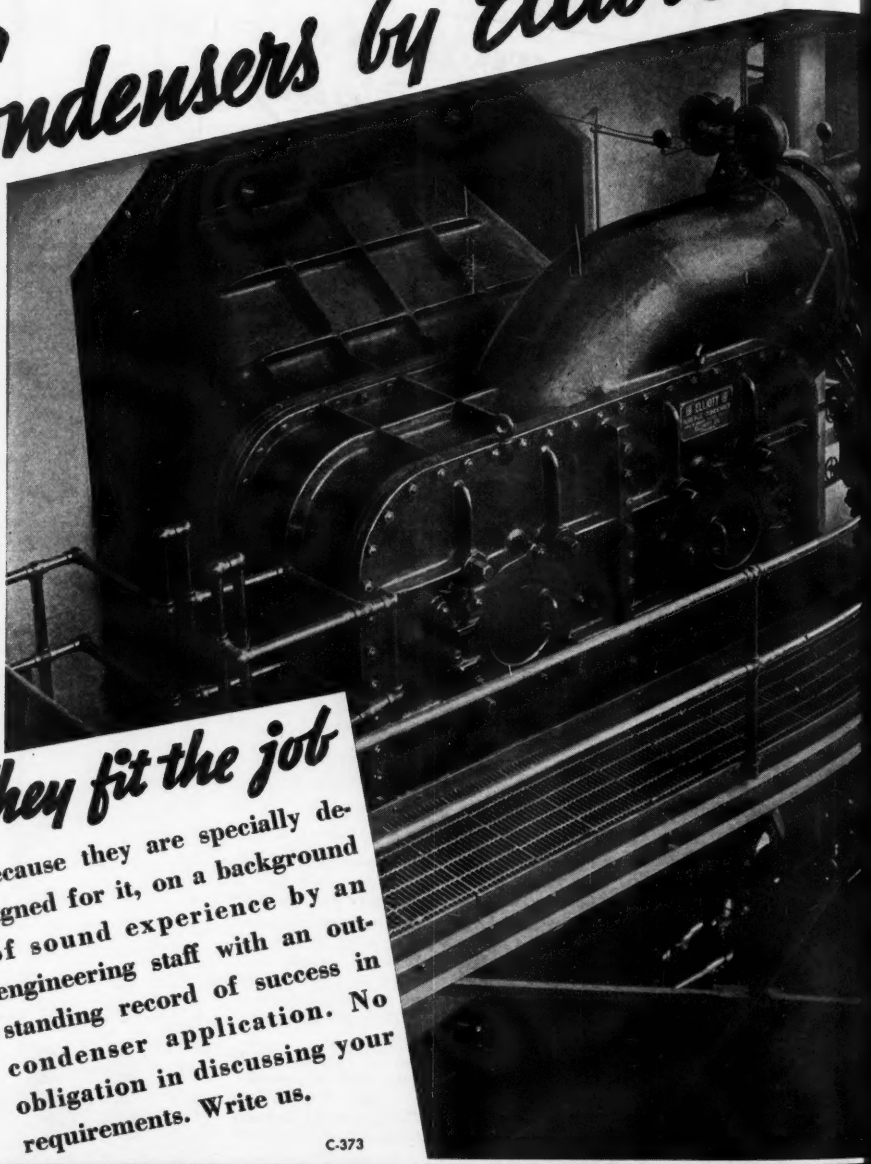

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District Offices in Principal Cities

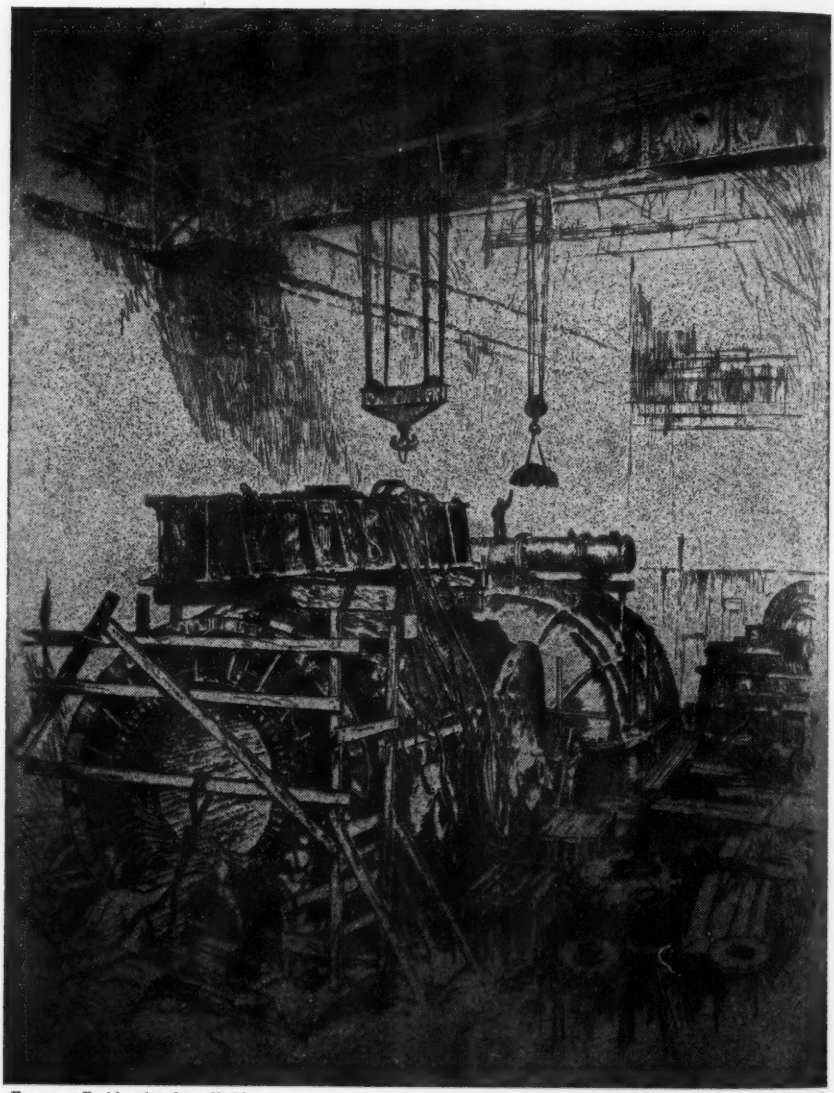
Utilities Almanack

JUNE

20	Th	¶ *California Independent Telephone Association ends convention, Santa Monica, Cal., 1940.*
21	F	¶ *American Society of Mechanical Engineers concludes session, Milwaukee, Wis., 1940.*
22	Sa	¶ *Management Conference, sponsored by Stephens Institute of Technology, begins, Johnsonburg, N. J., 1940.*
23	S	¶ *Public Utilities Advertising Association starts annual convention, Chicago, Ill., 1940.*
24	M	¶ *Society for the Promotion of Engineering Education convenes, Berkeley, Cal., 1940.* ¶ *American Institute of Electrical Engineers starts meeting, Swampscott, Mass., 1940.*
25	Tu	¶ *Canadian Electrical Association starts Golden Jubilee convention, Seigniory Club, P. Q., Canada, 1940.*
26	W	¶ *American Transit Association Bus Division starts Midwest Regional Conference, Davenport, Iowa, 1940.*
27	Th	¶ *Midwest Transit Association opens annual convention, Davenport, Iowa, 1940.*
28	F	¶ *Oregon Independent Telephone Association and Washington Independent Telephone Association open joint meeting, Hood River, Or., 1940.*
29	Sa	¶ *Michigan Gas Association will hold annual convention, Mackinac Island, Mich., July 8–10, 1940.*
30	S	¶ *National Conference on Planning will be held, San Francisco, Cal., July 8–12, 1940.*

JULY

1	M	¶ *North Dakota Telephone Association will hold session, Fargo, N. D., July 12, 13, 1940.*
2	Tu	¶ *Michigan Independent Telephone Association will hold session, Lansing, Mich., July 24, 25, 1940.*
3	W	¶ *Canadian Gas Association convenes jointly with Pacific Coast Gas Association Northwest Conference, Alberta, Canada, 1940.*



From an Etching by Otto Kuhler *Courtesy, Kennedy & Co., New York*

Turbine Construction

Public Utilities
FORTNIGHTLY

VOL. XXV; No. 13 JUNE 20, 1940

The Willkie Candidacy—Boom or Bouquet?

For the first time in many years, the name of a utility executive has been seriously put forward for the highest position in the land—the presidency of the United States. Other unusual aspects of the unorthodox Willkie candidacy are considered in this article.

BY HERBERT COREY

"OF course," said the editor of a magazine of national circulation, "my candidate for the presidency is Wendell L. Willkie."

"Isn't it a damned shame?"

He meant that in the opinion of men of affairs Mr. Willkie has not the faintest chance of nomination for the presidency. He is a business man. He is a sane, clear-thinking, successful business man. He is the head of a great utility company. His conduct of the affairs of that company has been highly praised. It has never been criticized except on the somewhat fuzzy ground that the company is too large and too successful and until the government of the United States stepped in to attack, its securities were sound. He led the fight against the TVA on behalf of the Commonwealth & Southern Corporation and throughout a six years' war no statement he made was ever successfully challenged. That praise could not be given to his opponents.

THAT six years' fight made him known to the business public. He was revealed not only as a leader in

his industry but as a notable spokesman for business in general and as an eloquent and scholarly lawyer. His revelation of the part the new Supreme Court is playing in changing the form of the government set up by the constitutional convention was perhaps the most closely argued and well-documented revelation of the revolution that has been published. *(Saturday Evening Post,* March 9, 1940.) His statement of the manner in which the American people have been pillaged by those who have "capitalized the depression" (*Fortune* magazine for April, 1940) was not a partisan document. Mr. Willkie is a Democrat and the Republicans came in for their share of devastating consideration. The editors of *Fortune* gave over the leading place in their editorial columns to emphasize its importance. Letters by the thousand came to Mr. Willkie urging him to become a candidate for the presidential nomination. Yet *Fortune's* editors agreed with the editor quoted in the leading paragraph of this article:

"It is naïve," they said in effect, "to dream that such a man can be nominated. He has had no contacts with the political machines. He has no delegates."

Political history shows that the candidate who goes to a convention without delegates rarely gathers any after he gets there. Mr. Willkie took only a bystander's interest in the suggestion widely held by business men that he would make a good President if he were elected. It was pleasant to hear, he said, and he enjoyed it. He is an amazingly outspoken man. Some men grow coy and prim when they are overtaken by a nation-wide compliment. Willkie probably told the boys to go to it, if they wished. It would be a damn nice spectacle. But he did not propose to waste any breath running for the nomination. That left him free to speak his mind wherever he happened to be. He took a hearty rap at the manner in which the New Deal had treated business. He said the New Deal's future depended on the continuance of the depression. If business were to begin running in high in spite of the things the New Deal had done to injure it, the country would have no more of it. The obvious New Deal plan was to keep business in low.

THAT pleased the Republicans enormously and those New Dealers who had not previously weakened their vocabularies by their attacks on Willkie called up their reserves and went grimly to it. Then the Republicans discovered that some of the things the New Deal had done were pretty good, in Mr. Willkie's estimation. He did not like the way they had done some of these things. There are scientists who do not approve the fashion in which a hen lays an egg but when the egg is ready for laying out it pops. He thought some of the New Deal's egg laying had been postponed too long. He approved some parts of President Roosevelt's foreign policy. The Republican politicians did not like that. The game of partisan politics has always been played according to rules in this country. Or in any other country. The man on the other side is a coyote pretending he is a lamb. Willkie was not a partisan of that pattern. He is a Democrat by birth and growth. Republicans like him because they have been out of office so long that their sins of which he talked seemed like ancient history. In anv

case he was more interested in the new sins. All the wheel horses on both sides allowed from their stalls that he had no chance in the race because he had no delegates. Willkie was not trying to get any.

Then the American Newspaper Publishers Association called him to speak at the annual banquet in New York. A newspaper publisher is supposed to have some news sense. Willkie would not have been asked if he had not become a national figure. If he had been identified only as the operating head of a great utility company, he would not have rated the honor. But he was better known as one of the few industrialists who had had courage enough to fight back at the New Deal. The previous week he had taken on at the Washington meeting of the newspaper editors' association Secretary of the Interior Ickes, who is nobody's pushover in debate. He has adapted Tony Galento's tactics, all the way from "I'll moider the bum" to kicking in clinches. It was Mr. Willkie who enjoyed the meeting.

THE publishers continued to look on Willkie as an extremely dark horse in politics, but he was a natural for their meeting. Their news sense told them, too, that the Republican leaders were suffering from the fidgets and that once in two or three blue moons a dark horse wins. A volunteer friend began to paper the country about Willkie, too, and that might have an effect. The volunteer is an amateur in politics but some amateurs have clicked.

That is the way the matter stands at the moment of writing. Willkie still has no delegates. He may never have any delegates. He is not an avowed candidate for the Republican nomination for the presidency. He is out of step with the dominant New Deal faction of his own party. Yet more people are talking about him every day. Perhaps the safest conclusion is that the popular attitude toward business is changing and he is a symbol of that change. When the Commonwealth & Southern Corporation was fighting most desperately to protect itself against TVA aggression, he spoke before the National Press Club in Washington and was applauded for the skill and power with which he presented his case. But the attitude of the audience was blandly acid. If he were to appear today before the same audience and speak on the great national problems on which he has been writing and speaking lately, it is safe to say his reception would be warm. But the change would be in the audience. Not in Willkie.

SO far as this inquirer has been able to discover, Willkie has never changed. Not in the fundamentals. He began his activities as a large, healthy

¶ "WILLKIE *thinks we should get back to a government of laws and not by men. Certain reforms are necessary, but they should not be carried into effect by the masterless men of commissions and administrations and boards. He thinks the Federal administration should be friendly to business. He thinks it is about time business stands up and fights.*"

boy in Elwood, Indiana, and it will be recalled that Indianians do not go in for trammels to any extent. Some of our best and most obstreperous intellects hailed from that state. They are strong for individual freedom. They obey the law because they have made the law and elected the judges and appointed the constables, and not because some benign being in a frock coat undertakes to tell them what to do. That is Willkie's platform today. He said that

"Either the people have believed that the state is merely the voluntary creation of individual citizens, responsible to them and designed primarily to protect their liberties, or else they have believed that the state is an authority in its own right to which individual citizens are subject and which could demand of them the suppression of their own desires and talents."

No one need ever doubt where Willkie stands:

"Our purpose should be not to augment the powers of the state but to increase the opportunities offered to the individual. We are a hard-headed, practical race, and we have chosen the enterprise system as our way of life.

"If in the next few months we can restore the functioning of free enterprise we shall find, perhaps, that life begins at '40."

Willkie's four grandparents left Germany in 1848 when the revolution against tyranny and repression was put down. They belonged on the side of the individuals who believed the state was their creature rather than their master.

His father made a fortune in Elwood, Indiana, when the natural gas boom was in full flower, and he, too, was an individualist. He was one of the intellectual leaders of the Indiana bar but he was continually refusing money-fat cases to defend some poor devil in trouble with the financial and political powers of Elwood. When natural-gas wells ceased to flow near Elwood and the town went to temporary ruin, his fortune went along with it. He had a big, green, frame house in the middle of a large lot and a wife and six children and lots of debts. The Willkie family's attitude toward arrogant big business in its relations to helpless labor and weak communities did not change. If anything it was intensified. There is a possibility that this continuous conflict with Elwood's nabobs had something to do with shaping Wendell Willkie's character, but it is no more than a possibility and a faint one at that. He seems never to have shirked a fight. Born that way.

"The elder Elwoodians recall that Willkie," said a reporter who visited Elwood to get a human interest story about the man who has no delegates, "was the fightin'est kid in town." I asked if it were true that he and his brother once licked the police force of Bloomington, Indiana:

" 'Why not?' asked the Elwoodian. 'Like as not they did.' "

Other things the Elwoodians told the reporter are that he was a hell-bender. That is a good Middle West word. He wore a red sweater and at one time belonged to (A) the Episcopal church, (B) the Methodist church, (C) the Socialist party, and (D) the student group ferninst all college fraternities. The church affiliations, the Elwoodians suggest, were prompted by the young Mr. Willkie's flickering taste in girls. They think he joined the

Willkie As President of the C&S

". . . Willkie was president of the C&S. He squeezed water and bankers out of the organization, cut rates, extended the business by the smartest merchandising methods the industry had ever watched, turned a failure to meet common stock dividends by $6,000,000 into a dividend payment with $10,000,000 to go, and made the C&S the utility company to which all the other utility companies pointed with pride."

Socialist party because when he spoke on a street corner he could always stir up a lively debate, which was good training for an aspirant lawyer and because some of the anti-Socialists could put up pretty fair scraps when the speaking was over. His leadership of the Barbs in college ended when he changed his mind and joined a fraternity. (The probabilities are that the Barbs were a pain in Mr. Willkie's neck. In spite of his hell-bending he was a studious youth, good looking in a rowdy way, a consistent winner of high marks in scholarship, and a young man of considerable worldly experience. Some of the Barbs were none of these things. They loudly refused to join fraternities into which they would not have been admitted anyway. That may have jarred Willkie.)

His worldly experience had been gained because he had to have the money. The Willkie family was broke, but it was the family decision that the six children should go to college. This decision may have been reached in one of the Willkie family debates, which were held practically every evening at full pitch in the half dining room, half library, lined with 6,000 books of every kind from Sir Walter Scott to Blackstone. The family might have been in complete accord in advance, but it was contrary to nature for the Willkies to consider any question in silence. Both father and mother were lawyers and ranked high in the profession in Indiana. Three of the four sons became lawyers. Their disagreements were entirely forensic and left no hard feelings. A Willkie would reverse himself in the midst of an argument if he could think of a puzzler to put to his opponent of the moment. That made the family's evenings somewhat difficult to follow but much more fun.

As Wendell Willkie had no money on which to go to college he got out and earned it. He was in turns bill collector, farm hand, steel worker, short-order cook, sugar miller in Puerto Rico, and other things. He always came home with the money and an invitation from the recent boss to come back again for more pay. When he graduated he hustled an appointment as teacher of history in the high school at Coffeyville, Kansas. He seems to have been a good teacher—he has established himself as a student of modern history of real standing — but a pedagogue's suit did not fit the young husky. At forty-eight years of age he still stands six feet and an inch tall and weighs 210 pounds of pretty fair muscle. He wanted to do things, and he knew that to do them he must have money. With money he was free. Without money he must take orders. There has never been much nonsense about the man:

"I'm in business to make money," he says today. Other business men talk of their devotion to "service." Their listeners thereupon put their tongues in their cheeks.

He won all honors in his three years' law course in Indiana University —Paul McNutt was a classmate; not necessarily a chum—and began practicing law. Made good. Went to war the day war was declared in 1917, served in France, and came home a captain. The most fun he had was after the war in defending AEF privates who were being court-martialled. Willkie respects authority. Practices it. But more than anything in the world he resents unauthorized authority. A bully at a big desk arouses in his mind a practically unconquerable desire to knock the bully cockeyed. Some of the poor little devils who were being court-martialled had only the vaguest idea of what it was all about, and had been yelled at and bedamned by officers who modeled their conduct on the Prussian sergeant plan. When Willkie got through with such an officer the unfortunate had an almost ineradicable desire to take off his hat to every private soldier he met on the street.

Then he married Miss Edith Wilk, a librarian—referred to by her husband and the large son at Princeton as "that little bit of fluff"—a gentle, intelligent, well-read lady, who prefers to conduct her affairs in the background. She can hold her own in anyone's company. Even in her husband's company, which must be something of a stunt in domestic relations, for that large, tousled, rumpled person is as argumentative today as in his Socialist soap-box period. She does not take too seriously what she hears and reads about the possibility that her husband may be tapped for the White House. No doubt it interests her, but also there is no doubt that she knows what the politicians know about the Willkie shortage of delegates, and that he is not a candidate for anything under the shining heaven. Those who know her indicate that if the improbable were to happen she would be a stay-at-home wife in the White House. She has only said:

"Suppose I did go to the White House? What would I do with it?"

The narrative of Willkie's middle period may be shortened. He was urged to run for Congress and would have done so except that he was offered a share in a law firm in Akron, Ohio,

which was too tempting to refuse. He moved on to the legal department of the Firestone Rubber Company. Akron began to look on him as a Boy Wonder. He seemed to know the legal answers. In conducting trials he was a ball of fire. This success may have been helped along by his manner and attire. He wore his hair as loose and wavy as ever did W. J. Bryan or Senator Borah and his well-cut suits looked as though he slept in them. "I look like an Indiana farmer," he was once quoted as saying. "That's the way I want to look. It's good for business." The then president of the Commonwealth & Southern Corporation got his eye on the youngster:

"Figure up what you made last year," he said, "and I'll double it."

Presently Willkie was president of the C&S. He squeezed water and bankers out of the organization, cut rates, extended the business by the smartest merchandising methods the industry had ever watched, turned a failure to meet common stock dividends by $6,000,000 into a dividend payment with $10,000,000 to go, and made the C&S the utility company to which all the other utility companies pointed with pride. He kept out of the deadfalls of the Insull era. He did not pretend to be a salvationist and he did not offer to give power away, but he would take a chance on extending his lines into any territory which seemed to promise a chance of future return. Willkie led the way in selling electric conveniences to his customers. He was talked about as one of the foremost operators in the country. He was paid $75,000 a year and owned two big Indiana farms.

Then the TVA moved in on him.

THAT story has been hashed and rehashed until it is tiresome. Throughout the fight Willkie's position was in defense of the individual against the government. The courts held that under the laws and the Constitution the TVA could not be barred from doing what it did. Willkie insisted that it is a pretty state of affairs when the government can take away property, whether from a great corporation or a poor man hoeing a garden. In this long fight he made no statement of fact that cannot be backed up. He was, of course, in a hopeless position from the start. Human sentiment, need, greed, and misinformation were arrayed against him. One of the United States Senators epitomized Willkie's lack of defensive power recently, in discussing the rivers and harbors bill:

"It would be possible," said he, "to frame a bill which would have something in it for every Senator and for every state. Such a bill would be utterly irresistible."

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Willkie thinks we should get back to a government by laws and not by men. Certain reforms are necessary, but they should not be carried into effect by the masterless men of commissions and administrations and boards. He thinks the Federal administration should be friendly to business. He thinks it is about time business stands up and fights. "Business cannot ask for government interference at one time and reject it at another. It hasn't been a pretty spectacle to see business, in the hope of advantage, craven and afraid to take its case to the people." He thinks we are just on the edge of great growth and safe prosperity if government will stop interfering with business.

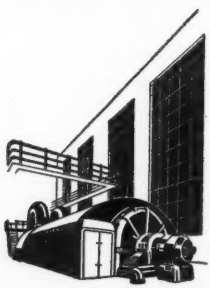
It's about time state governments wake up, he thinks, and get out of the way of interstate commerce through selfish tariffs and regulations. We should put a pause to our tendency toward federalized centralization.

"THE Federal government has more abundant life, all right, but what about the people?

"Every time the tired business man settles down, with a smile on his face, cheered by the promise that there will be a 'breathing space,' some government official thinks up something new to do to him——."

He may never have any delegates at the convention. He may be only a symbol of the changed attitude toward American business. He is not a candidate for the nomination.

But he certainly has stirred up a lot of talk.

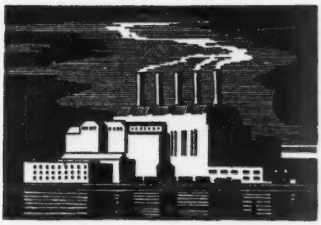


Our Economic Life

"IT seems to me that we have reached a cross-roads in our economic life, and we, the people, must make a decision. The alternatives are clear. On the one hand, government can extend its power until it makes the plans for industry, controls its production, and sets its prices. That, as we know, is a totalitarian government. The other alternative is equally clear and a little more daring. We can attempt to revive the free enterprises of the people. There is no doubt in my own mind as to which road we should choose. . . .

"We have ceased to be so optimistic as to think that the government will voluntarily change its present totalitarian program. It will only change that program when the people force it to do so. That, I think, is a cause worth fighting for. We have tremendous national needs which must be satisfied."

—WENDELL L. WILLKIE,
President, Commonwealth & Southern Corporation.



Rearmament Challenges Nation's Utilities

All forms of public utility service are bound to play an important part in the forthcoming campaign to bolster the national defense of the United States. Are the utilities ready for the call?

By T. N. SANDIFER

More than ever in national history the current rearmament effort involves the vital participation of American utilities and contemplates a major share for them in the actual defense of the country, should need arise.

Dynamic war today replaces yesterday's static strategy. Movement is kaleidoscopic. Blows are sudden and explosive. Speed, range, and force are the logistics of today's war; the type of war which America is now gearing every resource to meet, if it must.

Mechanized armies plunge forward, guided by radio command, supplied and reinforced by air. On the field a commander, riding cross-country in a combat car, talks to deployed tanks ahead by portable communication apparatus. The World War staff thought in terms of 20 miles; today, it may be 200.

This is the picture as the nation prepares. Already the radio nets, telephone companies, the railroads, power companies, and pipe lines are rehearsing their parts, where, in fact, they have not assumed an actual share in current acceleration of these preparations.

More than that, the program now being launched is a definite challenge to some, if not all, major utilities. In announcing the duties assigned to Chairman Ralph Budd, of the Chicago Burlington & Quincy Railroad, who was appointed to coördinate transportation services in the program, the President is quoted as saying that it was the settled policy of the administration since a discussion of the question with Daniel Willard, president of the Baltimore and Ohio, in September, that the government would not go into transportation operation unless absolutely necessary.

Thus Mr. Budd, who will work closely with John J. Pelley, president of the Association of American Railroads, has the obligations implied in this statement, or warning, according to the viewpoint.

Railroad and other carriers would continue to operate their own companies, the President was further quoted, but the government has the right to insist on prompt deliveries. And, he was quoted, all railroad men are aware that if the government ever has to take over the railroad carriers again, the chances are a hundred to one they will remain indefinitely in Federal hands. (Needless to say, this is also something for the telephone and telegraph carriers to think about.)

Prior to this blunt statement from the White House, railroads, power groups, and others had met announcement of the accelerated defense plans with assurances that their respective services were equal to the prospective demands.

Meanwhile, from the War Department and other sources have come indications of the major importance of all utilities in this ambitious military undertaking.

POWER and transportation are dominant factors in the choice of sites for new powder plants, ammunition loading plants, storage of reserve munitions, and expanded manufacturing units. As several hundred communities scramble in Washington for consideration of their advantages for such purposes, fortunate are those which can offer the best in these prerequisites.

Electricity has opened the door to new supplies of ores, minerals, chemicals, and other strategic materials which will be needed by the United States in the current program. Power is essential for other manufacturing processes. Transportation by rail and water is a vital factor in the projected expansion of production, since much of this auxiliary manufacture will be in the field of subcontracting—the supply of secondary units to a finished product on the assembly line in the main plant, perhaps many miles away.

As a single instance of the increasing use of new electric processes, the Westinghouse Electric & Manufacturing Company recently announced discovery of an electrostatic process of recovering iron ore from low-grade ore deposits. This discovery, with other processes being developed in various quarters, may pave the way to exploitation, for defense purposes, of deposits of coal as well as numerous minerals which have hitherto been impractical for general use because of difficulty or expense in their utilization.

A partial solution to the critical shortage of some necessary strategic materials may be found in this direction, in the opinion of some observers reporting on these efforts. Availability of ample power in areas where such subgrade ores and deposits are known to exist may prove to be a fortunate combination for certain communities in the present situation.

FOR these, as well as other reasons, a statement by H. S. Bennion, vice president of the Edison Electric Institute, that the emergency preparations for defense find the nation with adequate power is significant. He reported that, in the judgment of leaders of the electric light and power industry, the present power supply of this country is

adequate to meet the requirements of either a big armaments program such as that now contemplated by the government, or even a war emergency.

Maintenance of this position is assured, according to the same source, by the fact that enough additional generating capacity is under construction or actually scheduled for this requirement. Installed capacity at the end of 1939, in the United States, it was reported, exceeded the total noncoincident peak demands by more than 40 per cent, while during 1940 the industry will add 1,640,000 kilowatts of generating capacity, largely in steam plants in the industrial areas. An additional 1,250,000 kilowatts of generating capacity is scheduled for completion in 1941.

The present rearmament program finds the United States with four times its power capacity in 1917, and the amount of installed generating capacity per capita in this country is substantially greater than in Germany, Great Britain, France, or Italy. In addition, in 1917 in this country there was not much coördination of facilities in the industrial sections, so that an uneven distribution of power loads resulted, whereas today all generating stations in the country's industrial areas are geared to permit a high degree of utility through combined generating capacity where required.

THE nation's railroads are in a similarly prepared position. President John J. Pelley of the American Association of Railroads followed closely the promulgation of the unprecedented peace-time military expansion with the statement that the country's transportation system is equipped to meet any demands arising from this source.

Anticipating any possible demands, he added that a general survey of available equipment was in progress, during which, at this writing, 9 railroads had reported plans to order 3,255 cars in the ensuing thirty to sixty days. It was learned that 27,809 new cars have been placed in service during this year, with an additional 17,460 cars on order.

The close relationship of radio nets, telephone companies, power companies, and supplementary feeder services, such as those of pipe lines and railroads, is perhaps not generally realized by the public when it thinks of actual national defense preparations.

Nevertheless, these facilities in each community are active and even vital agencies for the safety of the people in these localities. Furthermore, in many instances they are actually rehearsing their parts in the preparations to defend that particular section of the country, or they have done so in the recent past. It is safe to say that few

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elements in any city, county, state, or regional area are better prepared for a military emergency right now than these very organizations.

This statement applies not alone to passive defense arrangements but to the active demands which may arise in the contingency, however remote it may seem, that some part of the country is threatened by foreign attack.

THE extensive maneuver campaigns undergone by the United States Regular Army, and to some extent the National Guard, have meant, for the various utility organizations in the areas involved, that they also were engaged in maneuvers—in New England last year, the simulated invasion by air of a section of the mid-southern coast, on another occasion, through the South and Southwest; more recently and at times on the Pacific coast, the power companies, radio stations and networks, telephone systems, as well as other utility organizations, went into action with the Army. They would do so in time of actual war on this continent.

Presumably, in an attack on the continental United States, the air would be the first lane of approach. Imminence of such an attack would call for a nightly blackout of all areas likely to be targets for bombers. The intense organization of a community, including the vital rôle of radio, telephone, and light and power companies, is realized only by those who have had experience with the procedure.

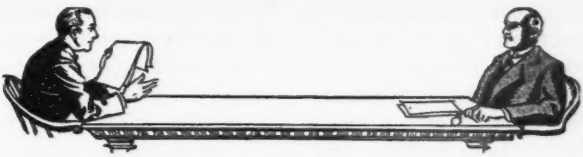
Such an experiment, on a large scale, was staged by the Army in North Carolina and illustrates the use of such facilities in defense. Together with organization of a warning net, comprising citizens and others who would actually undertake to watch for approaching "hostile" air forces, the telephone and radio services in the area designated for blackout practice were given instructions and prepared for duty.

Thus, upon receipt of warning from key points, the general blackout signal was transmitted by long-distance telephone direct to central radio stations. The station would immediately interrupt its regular program and make an announcement, calling for instant blackout in the community.

IN this particular maneuver program the Carolina Telephone & Telegraph Company acted to coördinate the services of the various independent companies, with some communities building their local notification system around the telephone, others depending entirely on radio.

The actual blackout stopped short of pulling the main switches of cities or towns to effect a total cut-off of light and power, to avoid unnecessarily interrupting essential community services—those of hospitals, elevators in public buildings, and similar facilities. Individually controlled lights, it was found in actual practice, were put out as conscientiously as necessary, and in certain instances reports came in of passenger trains blacking out as they approached the designated darkened areas.

In this test, radio stations proved invaluable, and the personnel of the telephone companies, as well as power and light groups, proved active and intelligent assistants to the armed services in achieving the simulated protective results. Thus, within two min-



Present Power Capacity

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utes of the signal from the defense commander for immediate blackout, all cities and towns operating on the telephone warning system were dark, while radio warnings were, of course, heard instantaneously. It was found that the average time required for total blackouts ranged from two to ten minutes, allowing for more isolated and scattered communities, and for detection and elimination of stray lights.

THE more recent maneuvers in the South and Southwest, just concluded, and which have been conducted during most of the past winter, have served as a real test of communications in the areas concerned; teletype, radio, telegraph, and telephone services participated in the actual operation of military forces to the extent necessary in transmission of orders, military communications of all kinds, and other activities involved in a close approximation of actual combat conditions in the various regions.

These exercises, the War Department believes, have been mutually beneficial to Army and utilities in giving them an idea of what to expect in an actual emergency. They also have uncovered situations and pointed to contingencies in advance of an actual condition when these might be serious difficulties. Most of these are matters which could easily be worked out ahead, or anticipated moves planned to avoid an actual occurrence of the kind.

The presence in utility organizations of numerous trained reserve officers and men also has been found helpful when the Army or National Guard enters an area on a maneuver problem. The civilian executives of these companies, like their forces around them, are of such caliber that defense situations, as presented in these rehearsals, have been met in the same spirit as those every-day events are dealt with in the course of utility operation.

A number of problems may arise in future, according to potentialities indicated in the various test operations. That is the advantage of actual field maneuvers or training over theoretical work with maps; practical situations are met. Thus the Army has given thought to the question of increased burdens on all utilities in a given defense problem.

EVEN in war, it is realized essential community requirements must be allowed for; certain priority schedules for transportation, communication facilities of all types, radio, telephone, telegraph, teletype, and for the allocation of power, are to be expected, and will systematize the load.

Adequate facilities exist in some sections, as in New England, in power and utility installations; in some other sections, due to a sudden emergency peak not anticipated under normal conditions, it might be necessary to have some interconnecting arrangement to meet the load. There are large areas of the country, as shown on any map, where population is sparse and scattered, and where, correspondingly, telephone and radio networks, transportation, and other needs are scaled down.

If a military situation called for extended military operations in such territory, it is readily seen that sudden, unusual stresses would follow. The Army has found, under some conditions, that the country's auxiliary services, usually controlled by such utility groups as pipe lines, railroads, and service companies, help to solve a temporary inadequate system's difficulties.

The use of these auxiliaries helps to avoid placing undue burdens on a community's normal facilities. In an actual war emergency it is to be expected that in a given locality, or even over the country, transportation as well as other utilities would be heavily loaded in caring for the extra military traffic in addition to meeting normal demands.

A number of questions can be anticipated accordingly; the problem of augmented power-line frequencies is typical, or whether increased terminal equipment must be installed.

IN relation to community blackouts, experiments have raised the question of whether to rely solely on radio in an actual emergency. The Army will be using certain secret frequencies in such a case, and these, as well as the normal radio and other communications, must be safeguarded from interference by hidden outlaw stations or saboteur attempts.

The Army has a very efficient and creditable organization of amateur reserve operators, who would be useful under actual service conditions. Their full utilization, in coördination with regular services, is still another detail for consideration.

All of these matters suggest the possibility of some national attempt at a coördinating agency. Whether such an agency with centralized authority would be a hindrance or an actual contribution to efficiency is a debatable problem. The Army has had no difficulty in working out its problems with the utility executives on the spot, wherever it has operated in the field.

Another factor, too, is the public attitude. In the actual cases in which the Army has experimented with defense problems, it has been found that the public has responded with surprising efficiency to the efforts built around the services of local utilities. Public and telephone, radio, and power units, have worked without a hitch on the problem placed before them by the military authorities.

Warfare, as demonstrated in Europe, leaves little place for the company runner of World War I, and little more for the primitive field communication systems of that period. Over battle areas of the scope indicated across the Atlantic, there is no time or

protection for the old-style strings of wires running for a mile or two up to command posts under fire. They were maintained with difficulty even in the first war of twenty-odd years ago, when the front was stabilized to some extent, and they were capable of only limited efficiency.

TODAY'S war calls for the full use of radio, telephone, radiotelephony, telegraph, teletype, and — not reported from Europe, but on the way in this country—television. In the past year or more, radio companies, electrical companies, and aviation have worked in close collaboration to perfect television from ground to air, and vice versa. Some remarkable results have been attained in the flying laboratory of the United Airlines, for example, which has participated in this work.

The practical application of this next step to military use is obviously on the way, and in ways that can readily be imagined. Similarly, many radio devices suggest their present adaptability, or future use, in military activity.

Most of the developments discussed here presuppose that a military emergency would occur on this side of the Atlantic, which is a radical departure in line of thought from what has always been taken for granted in the past—that the continental United States is inviolate, and that any fighting engaged in by American forces would necessarily be carried to the enemy in some distant location.

This new conception of the country's strategic situation stems from the revelation of war's tornadic course abroad, jumping seas, entire countries, water and mountain barriers, and eliminating all previous time calculations.

It is necessary, therefore, to fit this pattern over the map of the United States, with its intricate railroad lines, terminal construction, power lines, telephone networks, and radio installations, in order to visualize the application of defense schedules to these facilities, which are vital to that defense.

AS Representative Oscar Youngdahl, of Minnesota, recently pointed out, Americans are the consumers, or users, of 32 per cent of the world's total railroad mileage; 58 per cent of the world's telephones; and 36 per cent of the world's developed waterpower; in addition to which they ride in 76 per cent of the world's automobiles. They do this under normal conditions.

These figures suggest certain speculative topics in connection with defense:

> The telephone, the radio, and other communication systems in this country would probably have a more vital share in national defense than anywhere else in the world;
>
> The network of railroad tracks would be an invaluable adjunct to defense, on home grounds, of the world's largest remaining democracy; so

¶ "THE *close relationship of radio nets, telephone companies, power companies, and supplementary feeder services, such as those of pipe lines and railroads, is perhaps not generally realized by the public when it thinks of actual national defense preparations.*"

would its highways and auxiliary transportation systems — for troop transport, military supplies, actual defense installations, as in the case of railway batteries, and for quick maneuver;

The commercial waterways of the nation will bear a share in the preparations, such as indicated by plans to extend defense production inland;

Under an emergency, the application of electric power to many new industrial problems, both of increased production and development of new sources, is indicated, apart from any increased output which might be necessitated by definite military demands in the field.

IN this connection the question of allocation of all these facilities to proportionate military and ordinary usage has received informal consideration in one or another of the agencies involved. However, a report of the Central Electricity Board of Great Britain, published in March of this year, was cited by Mr. Bennion, whose earlier remarks were quoted here; this report stated:

> A preliminary examination indicated that the demands during the war were likely to be substantially below the peace-time estimates and that, if the prewar plant extension programs were carried out in their entirety, there would, during the war and for some time thereafter, be a substantially greater margin of spare plant than had been considered adequate when the programs were settled.

Of course, considering electric power reserves from the standpoint of the rearmament program, it is necessary to bear in mind the general distinctions between the three respective phases of production, transmission, and distribution. It may well be, as the electric power industry insists, that present capacity for power *production* is ample for any discernible emergency. It is in the *utilization* of this productive capacity that some adjustments may have to be made to avoid power bottle necks.

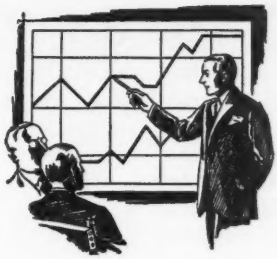
In other words, while additional power for war purposes would not be entirely a new load superimposed on an already existing peace-time industrial load, and whereas the armament program will result in much substitution and conversion of industrial plants for national defense purposes, the consequent shifts in location or in load characteristics may well require substantial readjustment in transmission facilities. At any rate, it is upon this premise that the National Power Policy Committee is reported at this writing to be still busily engaged with its plans for a national grid system for coördinating the smooth ebb and flow of the nation's power resources.

Perhaps here, too, the existing setup is sufficient to handle the job. Only time and the factual development of the rearmament program in detail will give all the right clues and answers.

Conservation *versus* Bureaucracy

"EVEN if oil and gas were being wasted by the choice of the people, I contend that no man and no one group of men have any right to proceed any further than to attempt to educate and persuade the people not to commit such waste. It would be better for the oil and gas resources of the nation to be wasted than for our form of government to be changed so as to give control of the people and their destinies into the hands of bureaucrats and quack statesmen."

—CARL E. BAILEY,
Governor of Arkansas.



Profit Sharing, the Key to Regulatory Success

Regardless of whether one looks upon rate reductions as the sole test of regulatory effectiveness, the Washington Plan, according to this author, is the most equitable, successful, and simple device so far developed for the control of public utilities.

By RILEY E. ELGEN
CHAIRMAN, DISTRICT OF COLUMBIA
PUBLIC UTILITIES COMMISSION

With the passage of time it is but natural that utility regulatory processes ought to assume more stability. That the rules, regulations, and practices of state regulatory bodies in the main should be similar admits of little argument. This naturally follows because Supreme Court decisions governing questions raised by any one such body generally apply with equal force to all others. And, too, the national organization of regulators for nearly a half century through its committees has been seeking means of hastening regulation.

Naturally it has taken many decades to get some order out of the chaos of earlier regulation. Many of the main regulatory questions have now been passed upon by the court. Those decisions make it even more obvious that some more direct and mechanical process must be found if public regulation is to proceed with expedition.

So far as I know there is only one method of regulation which has been tried and tested and found to meet those specifications. That is the Washington Plan or sliding-scale [1] regulation of the District of Columbia. That plan was authorized by Congress in the act of 1913 creating the public utilities commission of the District of Columbia. It was first put into practice eleven years later in the regulation of the electric light and power business in Washington. Since that time it has attracted national and international attention because of its year-by-year successful operation.

IN December, 1935, the Washington Gas Light Company elected to submit to that same form of regulation rather than the orthodox method employed in most states of the Union as well as the Federal agencies. Since that time the officers and personnel of the gas company have been able to devote more of their time to furnishing better service at more reasonable rates—time formerly spent in litigation, investigation, and so forth.

So we now observe a pronounced swing to the Washington Plan or sliding-scale regulation. In 1935 the author appeared and testified before a Joint Legislative Committee of New York state which under the guidance of its able counsel, Judge John E. Mack, delved into all known regulatory processes which promised less cumbersome and shorter processes in testing the reasonableness of private utility rates and services. That committee recommended the enactment of sliding-scale legislation for New York state.

Similarly Governor Curley appointed, in accordance with the direction of the legislature of the commonwealth of Massachusetts, a special body of experts to study simplified regulatory process, including the Washington Plan. I was invited to appear in the state house in Boston before and address a special gathering of legislators, regulators, educators, city managers, utility executives, citizens, and others who had any interest in the subject. This I did. Later the special committee appointed by the governor, approved [2] and recommended in a report to the legislature the adoption of legislation putting a sliding-scale arrangement similar to the Washington Plan into operation in that state.

SUBSEQUENTLY the commonwealth of Pennsylvania, upon recommendation of its public service commission, adopted laws providing for the regulation of utilities by a plan similar in all respects to the Washington Plan.

Now it is said [3] that

> In New Hampshire the public service commission has agreed to drop a rate case for a 5-year trial of an automatic system of raising or lowering rates each year on the basis of the previous year's operating experience.

Then the story goes on to say:

> It is reported that the Pennsylvania Public Utility Commission is considering a similar type of contract with the Associated Gas & Electric system electric utility serving York, Pa.—the Edison Light & Power Company.

Later this article gives credit to Washington for having successfully put into use its sliding scale or Washington Plan. So it would appear that a number of other jurisdictions are considering this simple, equitable, direct plan of regulation written by engineers and accountants. They had become restless over continuous legalistic bickerings of conventional regulatory technique. They had tired of seeing lawyers backing each other up and down the dark alleys of the law wherein the waiting public had expectantly held the bag for a decade without catching anything of value in it.

Sixteen years' experience with the operations of the Washington Plan has apparently taught thoughtful regulators something of its merits. Many have, either directly or through sending staff members to Washington, sought information concerning this plan. Among these are the commonwealths of Massachusetts and Pennsylvania, the state of New York, the city of Louisville, Kentucky, and the

city of Detroit, Michigan, and a multitude of other American places. The Japanese and Italian governments and the commissions of Hawaii and Puerto Rico have also sent representatives here to study it.

APPARENTLY the most attractive features which have appealed to others and caused them to give consideration to the Washington Plan are:

1. The provision for an automatic annual check-up and adjustment of rate structures;

2. The clarity and simplicity of the processes of accounting and engineering attending the annual determination of what is to be included in (a) the rate base, (b) the operating expenses, (c) what the utility is entitled to earn, and (d) the amount of the excess available for use as a measure of future rates;

3. The reduction of regulation to a factual rather than a conjectural basis, by laying down exact rules for the determination of essential data regarding rates, tolls, and charges;

4. The improvement in relations between the utility and its customers, the regulatory body and the general public results from the known annual hearing dates. This furnishes a forum where the year's rankles and questions can have a chance to be aired. An opportunity is thus provided for asking questions by any who have questions to ask.

5. It eliminates a tendency toward sporadic criticism of the acts of the commission by the utility and the public, and vice versa. Conversely it tends to simplify regulatory processes by reducing the problem to definite time, place, and known process where all questions are settled.

TABLE I

RATE BASES, EARNINGS, RATES OF RETURN, AND RATE REDUCTIONS

Year	*Rate base at Dec. 31st* (unweighted)*	*Rate base for the year (weighted)**	*Net income (return) earned*	*Rate of return earned*	*Excessive earnings*	*Portion excess earnings applied to subsequent rate reductions*
1924	$32,500,000	.....	.....	....	.....	$762,352
1925	34,679,427	$33,608,189	$3,223,391	9.59%	$702,777	352,164
1926	37,701,979	36,131,723	3,510,467	9.72	800,588	430,829
1927	42,595,625	40,699,951	3,750,997	9.22	698,500	337,895
1928	45,386,589	43,893,122	4,512,975	10.28	1,220,990	624,062
1929	49,889,912	47,970,898	4,958,655	10.34	1,360,837	660,035
1930	51,441,982	49,372,904	5,286,592	10.71	1,583,624	830,463
1931	57,821,943	55,125,620	5,268,276	9.56	1,409,482	861,023
1932	59,671,626	58,728,032	5,170,304	8.80	1,059,342	563,335
1933	64,953,244	61,759,448	5,080,999	8.23	757,838	379,841
1934	67,543,689	66,073,182	4,920,124	7.45	295,001	148,921
1935	68,898,515	67,407,554	4,986,251	7.40	620,722	310,755
1936	71,537,006	70,136,260	5,545,009	7.91	986,152	504,682
1937	75,731,338	73,792,842	5,864,029	7.95	1,436,458	770,080
1938	79,571,447	77,198,939	5,420,107	7.02	788,171	393,986
1939	82,527,938	80,974,759	5,985,565	7.39	1,127,080	575,297
Total						$8,505,720

*The terms "unweighted" and "weighted" refer to the statistical procedure of weighting plant investment added during the latest "test" year so as to reflect the number of months of said "test" year during which the plant represented by the added investment was in service.

Both the "unweighted" and "weighted" rate bases included allowances for cash working capital and for plant materials and supplies requirements. Cash working capital allowed for 1939 was $855,861.49, while $1,269,086.74 was allowed for plant materials and supplies requirements in the same year.

6. Another feature of the plan which many point to with considerable feeling as a very important advantage to the public and the utility is that through it managerial initiation, economy, and efficiency have their reward. Through it the utility may increase its fixed fair return providing it uses the excess earnings as a measure for reducing future rates. This feature is decidedly in contrast with orthodox methods of regulation whereby a uniformly, set rate of return is allowed all utilities—good, bad, or indifferent—which, in effect, penalizes industrial efficiency and puts a premium on waste and laziness. Under the Washington Plan a static rate of profit is not permitted to fall like the rain from heavens "alike upon the just and unjust."

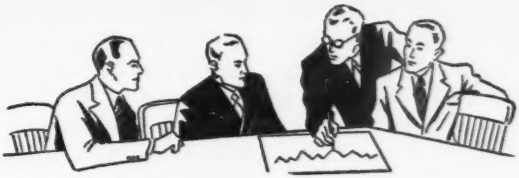
THAT the plan offers an intelligent and practical scheme of regulation is evidenced by its past history, in contrast with the cumbersome hit-or-miss processes of orthodox methods of regulation. Long periods of tedious and expensive work are required by this latter form of determining and testing the amount of the fair return that a utility either has earned or is entitled to and the propriety of the existing rate schedules. Even with these it involves a certain amount of star gazing. Exercise of judgment is founded solely upon the regulator's interpretation of a vast array of court decisions as applied to the facts in hand.

Here of necessity arise serious differences of opinion which more often than not lead to years of fruitless litigation—so far as the ratepayer is concerned. Quite fruitful for those who live by law. In contrast, the Washington Plan balances its last year's utility rate questions as soon as possible after the books are closed and a new balance is struck. The ratepayer gets his cut at once in reduced rates. He does not have to wait until long-drawn-out and costly valuation processes are followed, statutory hearings are had, values determined, and a new rate order issued, with possibly interminable appellate procedure after that.

Again, rate bases established under the Washington Plan tend to eventuate into the bare dollars invested in creating the existing useful plant. That is, the longer such a plan exists the more nearly it approaches the so-called prudent investment plan of rate base. This latter has long been regarded as the *ne plus ultra* of rate bases. Indeed, it is entirely possible to adopt that as the basis *de novo*. And this latter might be said to constitute the basis of the determination of the rate base of one of the two District of Columbia utilities now regulated in accordance with the Washington Plan.

Inevitably, when this plan is discussed it is generally cited because of its known favorable results in reducing rates and at the same time stabilizing on higher plateaus the financial conditions of the utilities so regulated.

YET, the Washington Plan also provides against the day when earnings may become depleted or reduced because of increasing operating expenses, advancing material, labor, and tax costs, or either one or more thereof. In it there is definite assurance of equitable treatment upon proper test. It has been critically suggested, in view of the fate of the Boston sliding-scale gas rate experiments of a quarter of a century ago, that the Washington Plan is all very fine while rates are dropping, but that it could not survive



Stabilization of Electricity

". . . the use of electricity may be said to be stabilizing itself rather than opening very many new fields for expansion. The present tendency towards the wide use of fluorescent light may, and no doubt will, tend to stabilize the amount of lighting current sold. General air-conditioning by gas is still somewhat in the future and may prove quite competitive."

a prolonged war emergency or other inflationary crisis. As a matter of fact, the automatic controls of the plan give it a far more equitable and elastic adjustment feature than the conventional method of regulation.

No one can rightly say that the public, the ratepayer, would be unwilling to carry out its end of such a bargain, particularly after having been on the receiving end of benefits for a considerable period of time. Any such assumption about the lack of sportsmanship of the ratepayer constitutes an unwarranted attribution to the ratepayer of an un-American sense of fair play.

Furthermore, such conjectures cannot take into full account circumstances and conditions affecting business in general. Unquestionably the Washington Plan by its very clearly written phraseology would tend to avoid the unpopular act of raising rates for a longer period than would be possible under orthodox processes. So it may well be left for the future to determine either the necessity or circumstances when and if this phase of the plan may be called into play.

We must recognize, of course, that rates cannot forever and ever go down, down, down under the Washington Plan or any other. For sixteen consecutive years, the Washington Plan (modified from time to time to adapt it to changing economic and other conditions) has produced ever-lowering rates for electric current in the nation's capital. The same plan as applied to the Washington Gas Light Company has similarly been quite satisfactory for several years. These rate cuts are not necessarily getting slimmer, either. The last reduction made in rates under the electric plan was larger than the average annual reduction for the entire 16-year period. There is no evidence on which to predict when, if ever, the continuous annual reductions of rates will cease and a definite reversal may be expected to occur.

IT has frequently been said, "Oh, yes, with an expanding industry such as

the electric light and power business it may be entirely possible to use the Washington Plan in a small jurisdiction like the District of Columbia, but it wouldn't work where there are a multitude of utilities or even on a number of electric utilities operating in any of the states."

That, I think, is a hard statement either to refute or to prove. There is no practical experience upon which to verify or disprove it. Yet it does seem only reasonable that if rates and services of one kind of utility can be successfully regulated by the Washington Plan, rates of others with different character of utility service may be regulated in like manner. In my judgment, based upon about nine years of administration of this plan, it is just as susceptible of application alike to mass transportation, telephone, gas, or electric service.

It ought to be remembered that while it is true that gas is not adapted to nearly so many different forms of use by varying appliances as is the case of electricity, on the other hand, the American Gas Association, acting nationally for the whole gas industry, has done and is doing a tremendously important job of putting gas to use in many new places in the home, business, and industry. In other words, the gas business has been changed from what many people believed was a moribund industry into a new and dynamic one.

While this has been taking place the use of electricity may be said to be stabilizing itself rather than opening very many new fields for expansion. The present tendency towards the wide use of fluorescent light may, and no doubt will, tend to stabilize the amount of lighting current sold. General air-conditioning by gas is still somewhat in the future and may prove quite competitive. Other recent developments appear as possibly retarding the immediate necessity for larger generating facilities. Less startling developments seem to be on the cards of the electric industry.

MODERN mass transportation in many localities needs a more flexible and intelligent system of rates to encourage greater use of its facilities at more reasonable and compensating rates.

So it is with the present highly variable and complex charges for telephone service. They make it susceptible of sliding-scale regulation. This would be particularly true if technical improvements should eventually ease the restrictive relationship between increased use of service and proportionally increased operating expenses, which have heretofore characterized the telephone business. The services of minor forms of utilities subject to regulation other than rails, truck, and busses engaged in mass transportation in urban service, may or may not be improved by the Washington Plan.

The old bugaboo of what may happen when rates have to be increased is the principal argument advanced so far by other utilities as a reason for hesitating to endorse the Washington Plan. They might well consider that, with the large variety of rates, tolls, and charges now found in most forms of highly flexible rate structures, a wider choice is given for either lowering or raising rates in a manner most pleasing in the lowering or the least painful in the raising.

It is these facts which have been ap-

praised by a multitude of students of regulation. They have invariably concluded that the Washington Plan of regulation marks an advance in the art. But some wonder whether it would work as well in a larger jurisdiction than the District of Columbia. Let's see what would be done in the regulation of far-flung utilities.

It is apparent that if Washington Plan regulation is good when applied locally, then the problem of conducting the rapid check (now employed in the District to determine the facts upon which to act) could be simplified for a larger jurisdiction, if the latter were to be divided into suitable units for the purpose of regulation by the Washington Plan. Bigness ought not to be a bar to its use. It would simply take a little more detail in dealing with a complicated property.

I DO not contend that the Washington Plan is a perfect scheme of regulation, or the only way to perform such public service. It is simply a well-ordered and systematic process of regulation. Indeed, its rule-of-thumb approach may even make it appear a rather crude method. But for all its crudeness the results obtained seem to mark it as a worthy process for intelligent study by both the regulators and regulated. Consider that there has been 150 per cent greater decline in rates under the Washington Plan than is shown by the composite experience in the remainder of the country during the sixteen years of experience. During this same period the financial standing of the utilities so regulated appears to have become more stable. They have gained in the favor of the public.

After all, regulation ought to be flexible and responsive to the public need. The Washington Plan is responsive in that adjustments of rate structures to accord with current operating results are made expeditiously and are

TABLE II

DISTRIBUTION OF RATE REDUCTIONS BY CUSTOMER CLASSES

Year	*Residential rates*	*Commercial rates*	*Street lighting rates*	*Miscellaneous distributions*	*Grand total distributed*
1925	$522,170	$240,182	.....	.....	$762,352
1926	248,135	104,029	.....	.....	352,164
1927	240,430	169,956	$20,443	.....	430,829
1928	135,295	154,764	9,156	$38,680	337,895
1929	298,755	320,794	11,183	(6,670)	624,062
1930	308,864	351,171	.....	.....	660,035
1931	369,021	439,709	21,733	.....	830,463
1932	334,665	526,358	150,000	.....	861,023
1933	100,988	312,347	6,934	.....	563,335
1934	179,779	193,128	.....	.....	379,841
1935	77,052	71,869	83,684	.....	148,921
1936	74,794	152,277	.....	.....	310,755
1937	260,515	244,167	.....	.....	504,682
1938	294,324	475,756	.....	.....	770,080
1939	141,503	252,483	.....	.....	393,986
1940	155,385	419,912	.....	.....	575,297
Total 16-year period..	$3,741,675	$4,428,902	$303,133	$32,010	$8,505,720
Per cent of whole	43.9	52.1	3.6	0.4	

seldom accompanied by litigation. Thought can be given to lowering rates in places where greater encouragement is given to the use of the service in periods of the day other than the peak, thus bringing about more continuity in use of the whole plant facilities.

The statistical tables herein have been compiled from the records of the results of sixteen years of the existence of sliding-scale regulation of the business of the Potomac Electric Power Company by District authorities.

Table I shows in the first column the year during which the operations took place, while in the seventh column is that portion of the excess earnings determined in accordance with the sliding-scale plan which is used for the purposes of reducing rates during the following twelve months. And while you are looking at the seventh column you may observe that the sum of the yearly amounts appearing in it totals $8,505,720, or an average annual amount of $531,608. If these reductions were totaled on a cumulative annual basis (as is done in other jurisdictions), the sum of financial benefits received by the public would reach the incredible proportion of almost $75,000,000—all this for the single city of Washington!

THE second column of Table I shows the rate bases at the end of each of the years shown in the first column. The item $32,500,000 was the base agreed upon at the inception of the plan. Of necessity, after ten or a dozen years of litigation it was a compromise between figures claimed by the public and higher figures claimed by the utility. You will recall what was stated above about the rate base continuously approaching the so-called prudent investment base. This column bears out that observation. At the end of 1933 the original rate base had doubled. The excess over the original base was, according to the Washington Plan, entered as actual dollars of expenditures made for plant extensions, accumulations of additions, or betterments. Notice that the original rate base has been increased by over $50,000,000 so whatever inherent mistakes were in the original base have with the passage of time become of less importance.

According to the plan, the base used for computing the fair return of the company, the cost of each piece of property is put in the base only for the period for which it was in use. The result of the application of that plan is seen in the third column. The amounts of the return actually earned according to the methods of computation followed in this plan are recorded in the fourth column. The rates of return actually earned year by year by the company are shown in the fifth column. Those rates are the results of dividing the figures in the fourth column by those in the third column. You will observe that the company earned returns as low as 7.02 per cent in 1938 and as high as 10.71 per cent in 1930. In the sixth column is observed the amounts of money which the company earned in excess of a fair return and was allowed to keep as compensation for greater efficiency and economy to management (reflected in providing the amounts shown in the seventh column). In other words, the sixth column contains the rewards given, according to the plan, for attaining more reasonable rates and services.

TABLE III

SALES OF ELECTRICITY AND REVENUES THEREFROM

Year	Gross revenues* Per cent of 1924	Kilowatt* hours sold Per cent of 1924	Average price received* per kilowatt hour sold Cents	Per cent of 1924
1924†	100.00	100.00	5.05	100.00
1925	94.26	117.92	3.90	77.23
1926	105.99	133.85	4.00	79.21
1927	112.88	147.38	3.86	76.44
1928	122.50	166.75	3.71	73.47
1929	129.64	186.46	3.51	69.50
1930	135.90	211.87	3.24	64.16
1931	139.15	233.20	3.01	59.60
1932	138.31	253.11	2.76	54.65
1933	138.40	262.92	2.67	52.87
1934	146.11	296.20	2.49	49.31
1935	160.95	342.56	2.37	46.93
1936	175.66	389.47	2.28	45.15
1937	184.88	430.43	2.17	42.97
1938	188.67	483.12	1.97	39.01
1939	199.29	534.54	1.88	37.23

* Excludes street lighting, street railway, and other electric corporation sales or revenues, as well as billing adjustments, delayed payment charges, and utility revenues other than from the sale of electricity.

† Revenues for 1924 are those received at the rates billed—they do not exclude collections in that year impounded by court order and of which a portion was subsequently refunded.

TABLE II shows how the money used to measure rate reductions was distributed among the rate schedules.

Table III shows how the gross revenues of the company have grown, along with the increased use of current and the decreased rates paid by the customers. When the plan was started the average rate per kilowatt hour paid by the customers was 5.05 cents, last year it was 1.88 cents, a decline of 62.77 per cent since the plan was inaugurated.

A novel feature of this plan is its sliding-scale method of accrual on account of depreciation. The annual accrual for depreciation reserve of the company grew from $768,472.88 in 1924 to a maximum of $1,442,905.47 in 1935, and in 1939 it amounted to $1,373,813.41. There has been a total accrual of $16,787,921.82 since the plan has been in effect. Of this amount the ratepayers put up $11,237,419.81 and the company the remainder out of its fair return.

The basic rate of return established for the company has varied from 7½ per cent at its inception to 6 per cent presently in effect. As economic conditions, interest rates, and earning power of other invested capital have changed from time to time so has the allowable rate of return established under the plan. The first change was to 7 per cent, then to 6½ per cent, and finally to 6 per cent.

So much for some of the more important and significant facts concerning the results of the operation of

the Washington Plan in the field of electric light and power. Perhaps a word or two here about the same plan in effect as a means of regulation of the property of the Washington Gas Light Company might serve to illustrate its applicability in that field.

This latter plan was worked out in December, 1935, and has been in operation since, with the result that with an established return of 6½ per cent the company earned in the year's end as of June 30th in 1936, 1937, 1938, and 1939, respectively, 6.94, 6.53, 6.93, and 7.74 per cents. This year promises even better results. The amounts used as measures of rate reductions have been in the order of years named above $47,433, $3,138, $50,492, and $163,575.

The total reward for better management so far aggregated $495,295.

Upon these statistical facts the previous assertions and opinions appearing in this article very largely rest. Nothing has been done which cannot be supported by data of a factual nature. By this plan guesswork and conjecture in regulation have been reduced to the bare bones and an easily understood, less controversial, and less costly process has been substituted.

In conclusion, a word of caution ought to be given in the light of the long experience with operation of sliding-scale regulations. It is a well-known, historical fact that the old Boston sliding-scale regulation, as well as the English sliding scales upon which it was patterned, failed largely because it was erroneously assumed that these arrangements were in themselves self-executing. Therefore, no organization was set up to see that they did function in the manner intended.

This proved to be a fatal mistake. Although a sliding-scale, profit-sharing plan may appear to work automatically, it is certainly not "fool proof." It requires constant and careful supervision by competent regulatory authority. In short, no such plan ought to be established without an accompanying staff of experts to give its attention to the operations of the company to which it applies.

Footnotes

[1] The details of the genesis of this will be found in the following articles:

"A Unique Experiment in Rate Regulation," by Aaron Hardy Ulm, PUBLIC UTILITIES FORTNIGHTLY, November 27, 1930, page 656.

"How the Sliding Scale Basis of Rate Making Works," by Mason M. Patrick, PUBLIC UTILITIES FORTNIGHTLY, April 27, 1933, page 506.

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[2] Legislative document 1600, 1936.

[3] *Pittsburgh Press*, Apr. 15, 1940.

Wire and Wireless Communication

THE Federal Communications Commission, on May 28th, decided to hold the reins on television until further experiments in more parts of the United States end the present rift in the industry.

Instead of beginning September 1st on a limited scale, as originally planned, commercial television will now await agreement among the industry's engineers as to the merits of any one of the present competing television systems.

In holding the amber light longer on this vast new business, the commission is chiefly hitting the Radio Corporation of America, whose selling campaign in the New York area caused complaints from competitors and led the commission to reconsider its original order. Led by the Allan B. DuMont Laboratories, Inc., RCA's opponents argued that widespread sale of RCA sets would "freeze" television at its present stage by getting the public stocked with sets incapable of receiving more distinct images.

In its report, the commission promised to encourage full commercialization of television as soon as the engineering opinion of the industry was prepared to approve any one of the present competing television systems. In the meantime, it proposed to license more television experiments in various parts of the country with the view of forestalling concentration of facilities in particular centers of population to the exclusion of the rest of the country.

DECLARING that "there is no room for squatters" in the television domain, the commission is inviting experiments in San Francisco, Los Angeles, Chicago, Washington, Albany, N. Y., Cincinnati, Ohio, and Boston. The number of stations authorized to any one licensee will be strictly limited.

The commission stated:

> It is essential to the progress of television that there not be a mere semblance of competition, but that there be a genuine and healthy competition within an unfettered industry. The American system of broadcasting has been established by the Congress on a competitive basis. Television will be an important part of that system.
>
> Contrary to the experience of other industries which have found that technical improvements were stimulated by large public use, in the television field a major portion of the industry takes the view that successful promotional activities at this time can act only as an anchor on experimental efforts to go forward. . . . Premature crystallization of standards will remove the incentive for technical research toward higher levels of efficiency.

The commission unanimously agreed with the testimony of Radio Corporation of America's opponents that due to the "lock and key" relationship of the television transmitter and receiver, substantial changes cannot be brought about once widespread distribution of receivers operating on a particular combination has locked the system to that level.

In addition to the DuMont Laboratories, which RCA has charged are financed by Paramount Pictures, dissatisfaction with RCA standards also was voiced by Zenith Radio Corporation and by the Philco Radio and Television Corporation.

The commission's action was forecast more than a month ago when Chairman James Lawrence Fly indicated after a conference with President Roosevelt that the future of television depended on the ability of engineers to develop a receiving set that could be kept abreast of advances in telecasting. Certain companies already have made contracts with purchasers to keep the set up to date technically. "As soon as the industry is ready to go ahead, the commission is, too," Mr. Fly said at the time.

COMMENTING upon the action of the commission in sentencing commercial television to another siege of experimental delay, *P. U. R. Executive Information Service,* a Washington weekly letter devoted to utility affairs, made the following observation in its issue of May 31st:

> The FCC seems to be passing the buck to the television industry in this week's order, which will delay commercial television operations until the whole industry agrees upon a set of standards for television transmission. At the same time, the stinging rebuke contained in the order to the Radio Corporation of America for its willingness to go into the television market immediately (under a set of standards which RCA regards as satisfactory) shows that the FCC feels deep resentment over the criticism that it is blocking television. The commission is probably gambling that RCA will be pressed into some sort of a compromise with other manufacturers at an early date and the FCC's own position vindicated.
>
> It can be expected, however, that criticism will be revived to the effect that FCC is holding up the parade just for spite. If the manufacturers fail to agree, and the public is deprived of television for a considerable period, the position of the commission may become quite embarrassing. RCA sympathizers are saying that the commission's order will not have much effect one way or the other on the public interest, but will simply put a premium on the claims of rival interests who may be chiefly concerned in obtaining patent and other commercial concessions for themselves. Yet, it must be admitted that early agreement on standards within the manufacturing industry would get television off to a much better start than if RCA were permitted to run away from the rest of the field. This possibly explains the unanimity of the commission's action this week.

The basis for the commission's attack on RCA's position as being opposed by substantial units of the television manufacturing industry was largely predicated on the attitude of Philco Radio and Television Corporation, Zenith Radio Corporation, DuMont Laboratories, and the American Television Laboratories. The last-named concern is controlled by the noted inventor, Dr. Lee DeForest. Neither DuMont nor American Laboratories were members of the Radio Manufacturing Association, whose standards RCA proposed to use.

THE action of the commission in putting television back on the shelf indefinitely is expected in trade circles to have the unforeseen effect of accelerating widespread acceptance of frequency modulated sound radio broadcasting, recently authorized by the FCC to be put on a commercial basis. Heretofore, FM has been caught more or less in the position of an innocent bystander, because of the quarrel over television standards, which affected settlement of the relatively minor conflict between FM and television frequency allocations on the radio spectrum. In its order early last month, however, the FCC gave FM the green light, and a week later put television on the ice.

This means that FM should have a good head start in developing a market for receiving sets without encountering commercial competition in the sale of television equipment.

An immediate spurt in the production of frequency modulation radio receivers was predicted in New York, following announcement that the FCC had approved commercial FM broadcasting and allocated the bands of 42,000 to 50,000 kilocycles for this purpose. The commission will issue broadcasting rules within a few weeks, so that the 130 pending applications for FM stations are suspended without prejudice and will have to be submitted again after the new rules are formulated.

There are three different makes of FM receivers on the market now, but within a few months at least a dozen manufacturers will offer such sets. These include

Stromberg-Carlson, which has been most active so far, General Electric, E. H. Scott Laboratories, Stewart-Warner, Zenith, Pilot, Farnsworth, Hallicrafter, National, and others. Zenith officials declared recently that their company would immediately push the manufacture and sale of FM sets.

The manufacture of transmission equipment is confined to three companies, General Electric, Western Electric, and Radio and Engineering Laboratories, Long Island City. Production of such equipment, of course, will be stimulated when licenses are granted for the erection of FM stations. At present, there are about 12 FM stations operating on an experimental basis.

RCA Manufacturing Company will give radio stations details on FM broadcasting within a short time.

Facsimile broadcasting will also be encouraged by the FCC announcement. At present, facsimile is being promoted chiefly by Finch Telecommunications, Inc., RCA, and John V. L. Hogan of Station WQXR.

* * * *

THE British intelligence service recently uncovered a "fifth column" plot to seize power and broadcasting stations and sabotage railway and telephone service, according to reports from London.

Surprise raids, it was revealed, netted "numerous important documents" seized before they could be destroyed as the government rounded up more than 3,000 enemy aliens as part of the clean-up of suspected "fifth columnists." The aliens were taken in heavily guarded trains to internment camps in the north and west of England.

Maps showing location of factories, telephone exchanges, and water reservoirs were found in the possession of the suspected Germans, it was reported. Clues discovered in the Netherlands during the German blitzkrieg in that country, it was understood, put intelligence officers on the trail of Germans of both sexes in England. Additional details of the plot were learned during the round-up of aliens which had been under way.

* * * *

MOST of the extra charges made by telephone companies for installing and removing telephone equipment in Oklahoma business houses and homes would be eliminated under terms of State Question 293, Initiative Petition 214, on which notice of intention to circulate was filed with Secretary of State C. C. Childers.

The measure, which would amend the state Constitution, would provide that no transmission company could charge for installing or removing telephones, handsets, buzzers, or similar equipment, or for changing its location, or for extra or long cords, and could make no additional charge for handsets, zoning, for any directory listing, or for reports on calls.

* * * *

THE Federal Communications Commission has completed its hearing opened on the application of WNYC, New York's municipal radio station, for permission to remain in operation up to 11 P. M. daily on the 810-kilocycle channel shared with it by WCCO, owned and operated by CBS at Minneapolis.

Ralph Clark, FCC engineer, made the closing statement, testifying as to the nature and extent of the interference with the facilities of WCCO which would be created by night operation of WNYC, and the importance of secondary area service to radio listeners in remote sections served by the Minneapolis station.

Such interference has been stressed on behalf of WCCO by the Columbia System, which opposes the granting of the application, and by the state of Minnesota, which intervened to protect the interests of residents of its own and other states served by WCCO. The interference would be less than represented, WNYC contended, and insufficient to justify denial of its application.

Another hearing was scheduled to be held on the "collusion charges" filed by Mayor LaGuardia on behalf of WNYC, and against opponents of its application for full-time operation.

Financial News and Comment

By OWEN ELY

War Problems of the Utilities

As war clouds rolled closer to the American continent, the problems which the utilities face were discussed by leading experts, as well as by informal exchange of opinion, at the recent (June 3rd-6th) Edison Electric Institute convention at Atlantic City, N. J. (See page 806.) It may be assumed that some or all of the following questions are in the minds of executives:

(1) If the United States should enter the war, to what extent would we follow the European system of "blackouts"? In England, despite increased industrial activity, blackouts and lessened peacetime activities have so reduced the demand for electricity as to raise serious problems regarding earnings and dividends. Canada has had much the same experience. Would the trend be similar in this country, or would our huge armament and export programs more than offset decreased consumption for other uses?

(2) The electric power industry's construction program for 1940, estimated at $600,000,000 to $650,000,000, is being accelerated, after some delays early in the year caused by the business recession and the cold winter. It is estimated that during 1940-41 about 2,830,000 kilowatts of steam generating power will be installed.

Even our present electric plant could, it is estimated, produce far more than its recent peak output if required, though average operating efficiency would be greatly reduced. The present expansion program would therefore seem ample, provided "bottle necks" do not develop owing to the concentration of tool and aviation business in certain localities. Are power interchange facilities adequate to take care of such special needs?

Leading utility systems are reported making surveys of the potential demand for increased power, as a result of expanding armament business. The principal problem is to determine the demand if manufacturing plants which might handle war business should run on a 24-hour basis. The question of new plants is, of course, much more difficult to estimate, but the time lag before the demand would be felt would be greater.

Where will increased industrial requirements be largest? The heavy industries, centered in a few eastern states, might bear the brunt of the load, particularly if regular automobile production is not curtailed. But administration plans to build airplanes in the Middle West, away from enemy reach, might increase power needs in that area, particularly if blackouts were confined to coast cities.

In the present hullaballoo over national defense, why has there been so little mention of the power "grid" proposal? Does this mean that the New Deal is satisfied with the preliminary plans presented by the utilities (not yet made public) to provide needed tie-ins? Does the hitch lie in the provision, which the utilities are reported to have attached to their plans, that participating companies must continue as exempt from Federal control as at present (in other words that the regulatory "status quo" will be maintained)?

Some fears have been expressed that the administration may seek to carry through its original ambitious grid plans without regard for the industry's desires. Senator Taft recently stated that a draft bill had been introduced in Congress au-

thorizing the RFC to create a subsidiary corporation with power "to engage in any business having relation to the national defense." He stated:

> In its original form, the bill would even permit the government to go into the electric power business and build a vast transmission system, a so-called grid. In fact, I understand the National Power Policy Committee, of which Ben Cohen is counsel, recently recommended that this be done through a subsidiary of the RFC.

CONSTRUCTION of a 275,000-volt transmission grid would add about 1,682,000 kilowatts to available load capacity of utilities in New York, Chicago, Boston, St. Louis, Detroit, Philadelphia, Pittsburgh, Washington, Cleveland, and Cincinnati (the cities which would be linked), utility officials are said by Dow-Jones to estimate. While reserve capacity over peace-time needs at the end of 1941 was estimated at 1,730,000 kilowatts, it was felt in some quarters this would still fall short of war-time needs by 1,600,000 kilowatts, which could be supplied by the grid within two years. Of the total $190,000,000 cost, $70,000,000 would be spent for transmission lines, $70,000,000 for transformers, and $50,000,000 to build lines connecting various companies with the grid. The grid would be financed in part by a Federal power authority through the medium of government-guaranty bonds; the utilities would pay about $9,000,000 and the government $4,000,000 of the $13,000,000 estimated annual operating cost. Latest reports seem to indicate that the grid plan, with administration approval, will continue to remain on ice indefinitely, or at least until the next session.

(3) Great Britain has perfected its famous "grid" as a war measure, and due to its vulnerability to air attack has also prepared a reserve "pool" of switches, transformers, transmission and distribution equipment, etc., stored in undisclosed locations to guard against sabotage. Should a similar program for storing spare parts form part of our defense program, or is our greater distance from the present scene of conflict sufficient protection against bombing losses?

(4) Will the President's avowed determination to hold down commodity prices prove effective? Copper prices, while showing no runaway trend, have already begun to reflect increased war orders. The rapidly mounting budget deficit, plus heavy foreign demands, have inflationary implications, but offsetting loss of foreign trade, and government controls, may retard the trend. Fuel prices, however, may be directly affected by war demands.

(5) Is the period of easy money approaching an end? Despite almost complete drying up of new financing, short-term money rates have hardened, as indicated by the terms of weekly Treasury financing. To what extent can the government continue to keep money rates at a reasonably low level? Has the era of refunding operations come to a close (except perhaps for occasional private deals)? How can "new money" financing be effected through convertible bonds or common stocks with the present low level of stock prices, and the public apathy toward present stock bargains? Does this mean that the industry must turn to the RFC for needed funds?

These questions, together with the integration problems now being threshed out with the SEC, seem likely to furnish many a headache for the industry—unless and until the European Allies prove victorious over Germany, and a conservative administration replaces the New Deal.

SEC to Disclose Integration Plans

THE SEC in an apparent about-face of policy has now agreed to furnish résumés of its own views as to how system properties should be integrated. Accordingly, pending hearings have also been postponed in many cases, and a complete change of program appears likely.

United Gas Improvement Company was the first to win such an agreement, followed by Engineers Public Service and Commonwealth & Southern. The

TABLE I

NATIONAL POWER & LIGHT COMPANY

Principal Investments and Their Estimated Value

	1939 Earnings for Common (Millions)	*Multiplier Used*	*Approx. Value (Millions)*
Pennsylvania			
1,879,095 Shs. Pennsylvania Pr. & Lt. com.	$4.9	10	$49.0
North and South Carolina			
16,806 Shs. Carolina Pr. & Lt. $7 pfd.	—	—	1.6*
2,499,998 Shs. Carolina Pr. & Lt. com.	1.0	7	7.0
Alabama			
799,996 Shs. Birmingham Elec. com.	.2	5	1.0
Texas			
499,987 Shs. Houston L. & P. com.	2.5	10	25.0
Miscellaneous Investments (estimated)	—	—	3.6
Net Quick Assets (principally in cash)	—	—	19.0
Total			$106.2

*At current price around 98.

SEC plans for these companies are expected to be made public shortly.

It is reported that the commission plans to issue a supplemental notice to each of the nine holding company systems, tentatively grouping the properties of each into "integrated" systems, and suggesting possible combinations of these systems which may be retained (with alternate suggestions for grouping of properties). It will also advise which nonutility properties can be retained.

It is possible that the SEC may go farther and suggest a central core around which each system should be required to group its properties. Thus, Standard Gas might be required to center its system around Pittsburgh, North American around St. Louis, UGI Philadelphia, Engineers Public Service in Virginia, etc. With more far-flung systems, such as Electric Bond and Share and Cities Service, the problem would naturally be more difficult.

TABLE II

NATIONAL POWER & LIGHT COMPANY

11-year Consolidated Earning Record

		Preferred Stock		*Common Stock*	
Year	*No. Times Charges Earned*	*Earned per Sh.*	*Dividends Paid*	*Earned per Sh.*	*Dividends Paid*
1939	1.43	$27.90	$6.00	$1.12	$ .60
1938	1.45	30.87	6.00	1.28	.60
1937	1.48	32.66	6.00	1.37	.60
1936	1.36	25.36	6.00	.99	.60
1935	1.32	22.51	6.00	.85	.75
1934	1.31	22.64	6.00	.85	.80
1933	1.33	23.65	6.00	.90	1.00
1932	1.42	30.55	6.00	1.26	1.00
1931	1.54	38.63	6.00	1.67	1.00
1930	1.68	45.16	6.00	1.99	1.00
1929	1.72	50.22	6.00	2.17	1.00

National Power & Light Company

In the accompanying Table I we have estimated the liquidating value of the principal investments of National Power & Light Company based on 1939 earnings. While data are not available for some of the smaller companies controlled, such as Memphis Generating, Edison Illuminating of Easton, Roanoke River Power, South Texas Utilities, West Tennessee Gas, etc., the combined value of these investments would perhaps not exceed several million dollars. Memphis Natural Gas, currently selling on the New York Curb around 4, is worth approximately $600,000 to National Power, which has 150,000 shares or about 16 per cent of the outstanding stock. The accompanying chart indicates corporate relationships. It is obvious that so far as integration problems are concerned, the two principal systems are in Pennsylvania and Texas. Presumably if the SEC would not allow both to be retained, Pennsylvania Power & Light Company would have preference over Houston Light & Power.

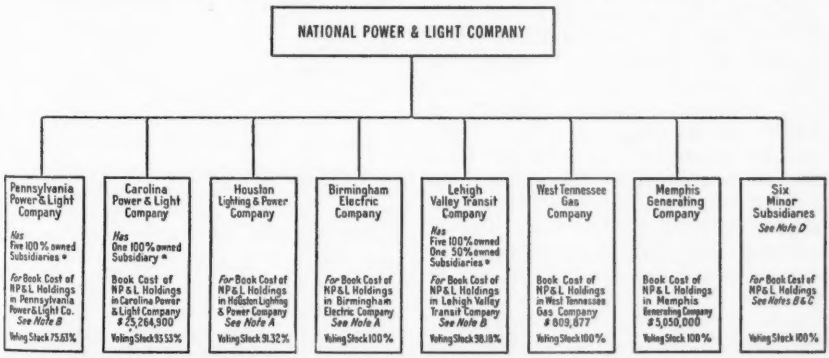
While it is difficult to determine proper "multipliers" to apply to the 1939 earnings available for subsidiaries' common stocks (practically 100 per cent owned by National Power & Light), the figures in column 2 were selected with recent market prices for utility stocks and the earnings records of the four companies as determinants.

The total estimated liquidating value of $106,200,000 would, after deducting approximately $18,000,000 funded debt and $28,000,000 preferred stock, leave a balance applicable to the 5,456,117 shares of common stock of approximately $60,-200,000, or about $11 per share. This compares with the current market price around 6.

At its current price the common stock yields 10 per cent based on the dividend rate of 60 cents. The 11-year consoli-

CORPORATE CHART, DECEMBER 31, 1939

Showing Major Investments in Subsidiaries and Percentage of Voting Stock Owned



A—Combined book cost of holdings in Birmingham Electric Company and Houston Lighting & Power Company $17,452,931

B—Combined book cost of holdings in Pennsylvania Power & Light Company, Lehigh Valley Transit Company, the four "minor subsidiaries" in Pennsylvania, and miscellaneous investments in that state 79,810,302

C—Combined book cost of holdings in the two "minor subsidiaries" outside Pennsylvania 1,812,746

D—These subsidiaries consist of one ice and water, one water, two transportation, and two electric companies.

*SUBSIDIARIES OF

Pennsylvania Power & Light Company . . . . one real estate, two gas, and two water companies.
Carolina Power & Light Company . . . . . one real estate company.
Lehigh Valley Transit Company . . . . . one real estate, one toll bridge, one gravel, one amusement park, and two transportation companies.

dated earnings and dividend records for the preferred and common stocks are shown in Table II. The strong position of the $6 preferred stock (currently around 78 to yield about 7.7 per cent) is indicated by the cash position, as well as the simple system set-up.

International Telephone

INTERNATIONAL Telephone is currently selling at 2⅜, or about 3 times the 1939 share earnings of 76 cents, and at less than 2½ times the average earnings of the past five years (about $1). However, these earnings are on a consolidated system basis with subsidiaries' local currency earnings translated into dollars (whereas in many cases it is impossible, owing to government regulations, to effect such conversions and move the earnings into the parent company treasury). The parent company (alone) was able to show net income of 24 cents per share in 1939 compared with 20 cents the previous year. While interest charges are being promptly met, its current assets (almost entirely cash) at the end of 1939 only moderately exceeded the current liabilities.

The parent company's investments (and advances), carried at about $350,000,000, are divided approximately as follows: Telephone subsidiaries 71 per cent, cable and radiotelegraph 10 per cent, manufacturing and sales 18 per cent, miscellaneous 1 per cent. The huge Spanish plant in which International has a stake of about $67,000,000 (second largest investment) has been omitted from the system's earnings statement for several years. Soon after the outbreak of civil war in that country it was taken over by the government, and in 1938 by the victorious Franco régime; but after a year's negotiations arrangements are now being made for its return to parent company management. Plant damages incurred during the Spanish war, not yet fully estimated, will probably run into millions of dollars. The 17-story steel and concrete office building in Madrid was struck by 186 shells, but the damages were repaired at a cost of about $220,000.

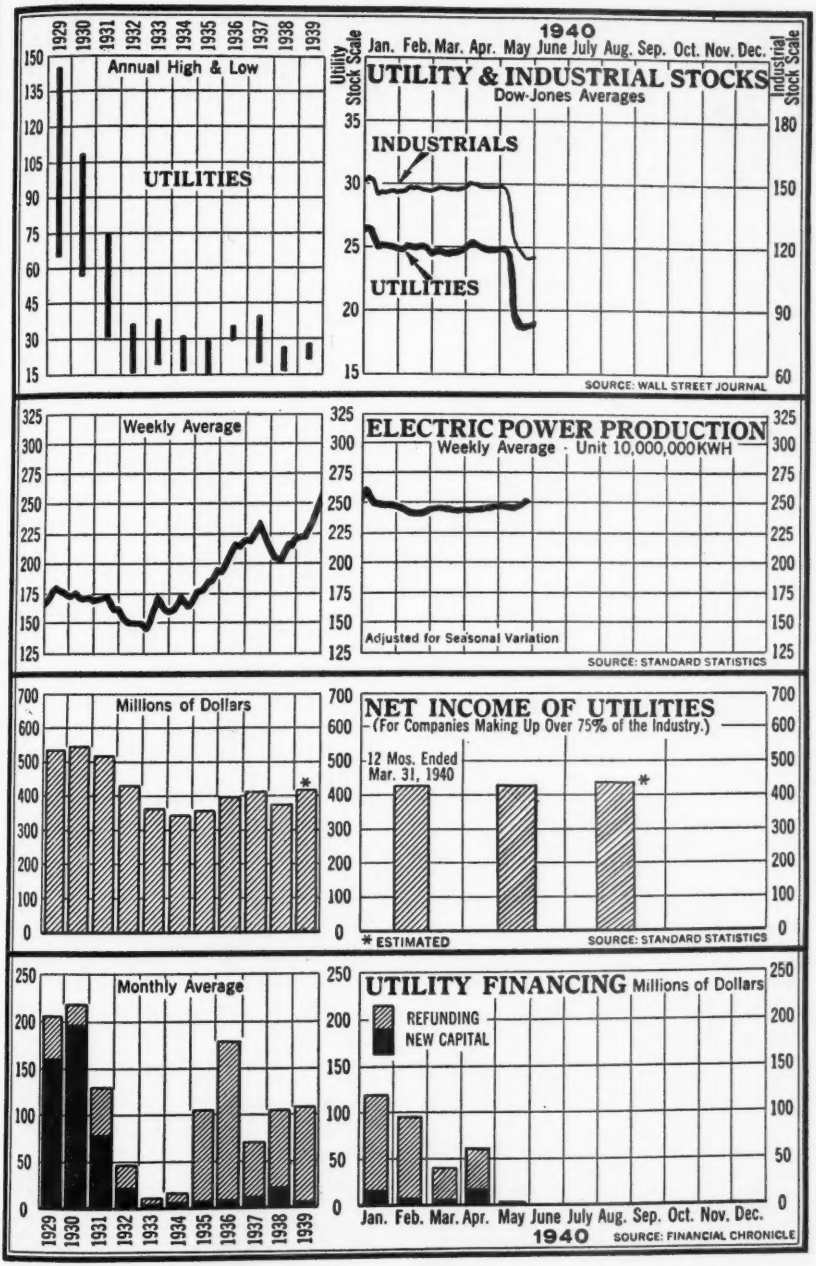
It seems doubtful whether the Spanish companies can contribute substantially to earnings for some time, since the government controls exchange of pesetas into dollars. However, the manufacturing plant, restored to the company about a year ago, will probably be permitted to buy sufficient exchange to purchase needed raw materials and expand operations. The export business formerly supplied by the Antwerp factory will probably be transferred to Spain.

IT&T manufacturing plants in Denmark, Norway, Czechoslovakia, Austria, Belgium, and Germany are now under Nazi control and most of them are probably working on German war business. Remaining plants in nonbelligerent countries are said to be working night and day, unfilled orders at the end of 1939 being considerably larger than in 1938.

German and Polish manufacturing properties were omitted from last year's earnings statement and presumably the other properties mentioned above will be omitted this year. It is difficult to attempt any estimate as to how much of the total investment has been involved in the latest "blitzkrieg," but presumably it would not amount to over 5 or 10 per cent of the system total. Remaining factories are located in England, France, Hungary, Roumania, Switzerland, and Australia.

European telephone services are confined to Roumania and Spain. The important Shanghai phone property, while active, has been affected by a decline of over one-half in the exchange value of the Chinese dollar in 1939. The Latin-American telephone systems (the Argentine being the largest single system investment) contribute a substantial part of the system revenues as indicated in the following table (approximate millions of dollars):

	1939	*1938*
Manufacturing sales ...	$59	$64
Telephone service	32	34
Cable service, etc.	6	5
Miscellaneous	3	4


Annual High & Low
UTILITIES
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939
150 135 120 105 90 75 60 45 30 15
1940
Jan. Feb. Mar. Apr. May June July Aug. Sep. Oct. Nov. Dec.
UTILITY & INDUSTRIAL STOCKS
Dow-Jones Averages
Utility Stock Scale
Industrial Stock Scale
INDUSTRIALS
UTILITIES
35 30 25 20 15
180 150 120 90 60
SOURCE: WALL STREET JOURNAL
Weekly Average
325 300 275 250 225 200 175 150 125
ELECTRIC POWER PRODUCTION
Weekly Average · Unit 10,000,000 KWH
Adjusted for Seasonal Variation
SOURCE: STANDARD STATISTICS
Millions of Dollars
700 600 500 400 300 200 100 0
NET INCOME OF UTILITIES
(For Companies Making Up Over 75% of the Industry.)
12 Mos. Ended Mar. 31, 1940
*
* ESTIMATED
SOURCE: STANDARD STATISTICS
Monthly Average
250 200 150 100 50 0
1929 1930 1931 1932 1933 1934 1935 1936 1937 1938 1939
UTILITY FINANCING Millions of Dollars
REFUNDING
NEW CAPITAL
Jan. Feb. Mar. Apr. May June July Aug. Sep. Oct. Nov. Dec.
1940
SOURCE: FINANCIAL CHRONICLE

What Others Think

Electric Institute Stresses National Defense

THE preparedness of the electric power industry in the United States to meet the requirements of the national defense seemed to be the dominant theme heard at the recent annual convention of the Edison Electric Institute at Atlantic City. The president of the Institute, C. W. Kellogg, sounded the keynote in the opening regular session on the morning of June 4th when he said that the electric power companies of the United States are prepared to fill all requirements for electric power necessary in any defense program that may be undertaken by the nation.

He added that utilities can best maintain an ample supply of power if left free to exercise their own judgment, initiative, and present position of responsibility.

A strong, adequate, and willing industry, ready to exert its full powers without loss in time or efficiency in the support of its government for national defense, is one of the greatest assets a country can have to prepare for or to prosecute a war, he declared. Mr. Kellogg further stated:

> I am convinced that this is the position of our industry, and that *our government can count upon the availability of an adequate power supply for national defense without the need for expenditures or other special measures on its own account.*
>
> The electric utilities supply about three-quarters of all the electric power used by industry in this country and therefore face a great responsibility in the present situation. They can face it with complete confidence, for they are prepared with the requisite plant facilities, experienced organization and personnel to meet the responsibility. Ample power capacity is available to supply all the existing industrial establishments of the United States. Incremental new power capacity can be added just as fast as new munitions factories could be built. Never in history has any country been so well prepared with power for the production of munitions as is our country today.

THE excess installed generating capacity above the peak demands of our power stations is more than 40 per cent, he reported, with new construction under way to maintain that margin above normal growth. Mr. Kellogg said:

> I am sure I speak the sentiments of every electric utility in this land when I say that the industry is ready and willing to do its best to aid our government and its armed forces in bolstering the national defense. It did so in 1917 to the limit of its plant facilities, and it is ready to do it again, this time with much more ample resources, so that electric power supply need place no limitations on the production of munitions of war. Other factors, such as the supply of skilled labor, may set the limits, but not the supply of electric power.

Pointing out that the present war has produced a very little increase in the electric output of Canada and none at all in England, according to the report of the British Grid, Mr. Kellogg calculated that the entire war munitions load of the last war would today be equivalent to only 8 per cent of the present annual output of the electric light and power industry.

Quoting from Washington's Farewell Address the advice that "timely disbursements to prepare for danger frequently prevent much greater disbursements to repel it," Mr. Kellogg observed that the First President, in the same paragraph, urged the nation to "cherish public credit." "One method of preserving it," Washington said, "is to use it as sparingly as possible." Mr. Kellogg told the convention:

> Surely the best way to follow this sage advice is to leave on the shoulders of private enterprise the job it has been doing and can continue to do with a maximum of efficiency, so that the nation's credit and resources can

be devoted to the procurement of the engines of war and the training of military forces.

If the initiative is left in the hands of the country, its engineering and operating forces, better than any other agency, can contrive to use existing resources to the maximum degree, thus reducing to a minimum the necessity for any new construction in time of emergency. This will relieve the demand on materials and on labor and conserve the national credit at a time when they are badly needed for other purposes.

IN times of emergency the utilities' resources in trained and seasoned personnel are of even greater importance than their vast resources of physical plant, he asserted. Working in smooth-functioning organizations, long accustomed to meeting emergencies any time of the day or night, they are accustomed to the responsibility of keeping the wheels turning and of meeting any demands of the service, Mr. Kellogg continued:

They are skilled in finding a practical solution of difficult technical problems, in making repairs, and installing and adjusting machinery. They are experienced in speedily restoring electric service when fire, storm, or flood may disrupt it. The most valuable defense against possible interruption of service from acts of war or sabotage, more valuable than spare generating capacity or extra transmission lines, is this capable body of trained and resourceful men.

The Industrial Mobilization Plan of 1939, Senate Document Number 134, says, "The surrender of all individual rights in war time is undesirable, if it can be avoided, but the assumption of additional individual responsibilities will be essential to the efficient coördination of a national industrial effort." The electric utilities are prepared and willing to accept the "additional individual responsibilities" and are confident that neither on the score of willingness nor on the score of available resources will the Army, Navy, or other national defense agencies have reason to call upon them to surrender the individual rights referred to in the statement I have quoted. Most certainly the utilities can best maintain an ample supply of electric power if left free to use their own judgment and initiative and if kept in their present position of responsibility.

Let all of us continue to exercise these two great powers that distinguish private enterprise—initiative and efficiency—that we may retain and strengthen our hold on the public confidence and that this country may continue to profit by our contributions to its welfare. In this way also we can be most effective in the defense of our nation.

CHARLES E. Wilson, president of General Electric Company, in an address entitled "The Practical Way Out," followed up Mr. Kellogg's argument that business should be allowed to work out its own problems with the suggestion that the methods of enlightened business are the best guide for the eventual reconstruction of the world.

Likening the elements of a dispute between government and business, or between nations at war, to those involved in such local problems as strikes, he asserted that in each instance a satisfactory settlement called "not merely for an impatient or passive tolerance, but for the maximum of consideration and appreciation of the opposing interests and viewpoints."

Mr. Wilson said America and American business can best contribute to the ultimate peace and harmony of the world by managing their own affairs peacefully and harmoniously. He stated:

In our national economic affairs, we simply must reach a better human understanding so that the productivity of the industrial machine, which all have helped to create, may be greatly increased and kept running smoothly, with the minimum cost of repairs and in the maximum interest. . . . We cannot reasonably expect to inspire confidence in the court of world opinion unless we can approach it with a record of success in our own democracy.

Industrial and scientific progress will continue, he predicted, despite the present chaos and the disillusionment following the World War, because society is forever clamoring for the things that will make it better; but there must be brought in a new understanding of human relations. Mr. Wilson said, "Business has been a great civilizer. It can be a better one. Education, coördination, research, and engineering development are four factors in it which will help meet the new challenge to civilization."

TAKING the financial approach, Edwin Vennard, vice president of Middle West Service Company, Chicago, stressed the fundamental soundness of the electric utility industry in the realm of finance. He warned, however, that this

position can be maintained only if the current trend of net revenues is changed. He pointed out that although increased use of electricity brought a rise in the gross revenues of utilities of 27.8 per cent since 1933, net revenue increased only 15.7 per cent.

Rising taxes, diminished opportunities for operating economies, and accelerated rate reductions have combined to bring about this disparity, according to Mr. Vennard.

Financial solidity came largely as a result of new construction undertaken by the electric companies in excess of requirements during the early years of the decade, the Middle West executive said, when President Hoover was urging all industry to continue building to lessen the effects of depression. From 1932 to 1937, property retirements exceeded new investments and little "new money" was needed; but recently new capacity has again been added.

Beginning in 1933, he demonstrated through charts, taxes on the utilities have steadily increased and, mostly because of taxes, operating expenses have risen both in total and in relation to revenues. He stated the increase in utility taxes since 1927 as 123 per cent.

Prior to 1930, Mr. Vennard recalled, the industry was going through a process of integration, in which physical consolidations and interconnections between companies were accomplished on a large scale.

These consolidations resulted in constantly lowered costs of making and delivering energy, he said, and made possible frequent rate reductions; but the inevitable slowing down of this process now makes additional operating economies increasingly difficult to effect. Even the "splendid improvement" in power plant efficiency has been insufficient to offset the increasing taxes, he asserted, so that fuel cost is no longer a controlling factor. He said:

> Fuel clauses have been considered important in rate schedules; tax clauses are now more important. Improved operating efficiencies will probably continue to be largely or completely offset by uncontrollable increased expenses such as taxes.

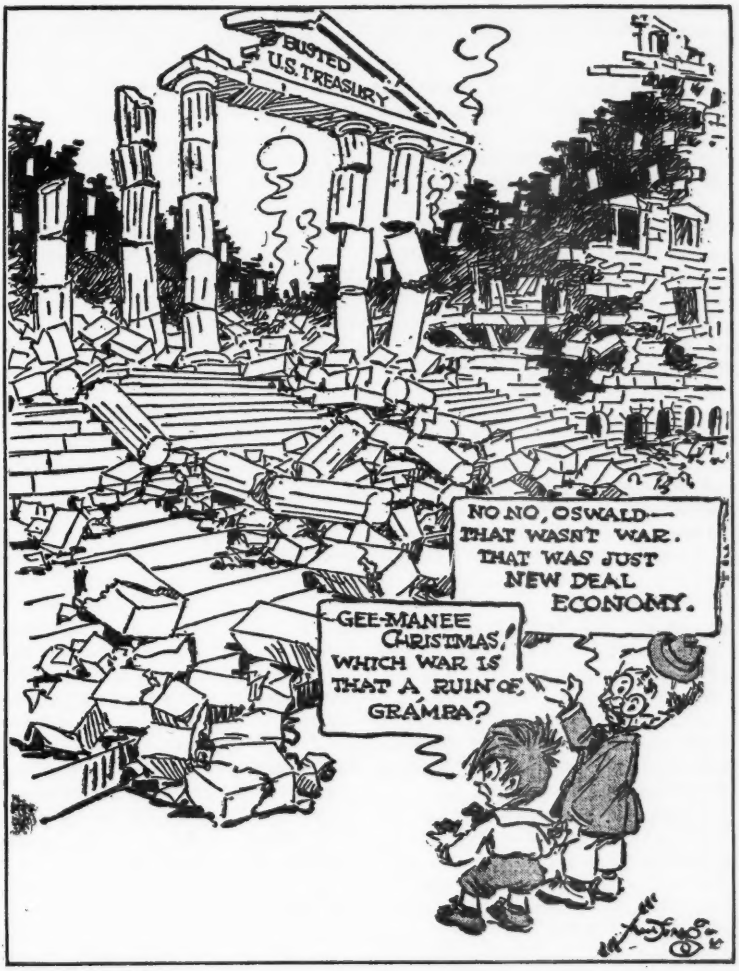
At the afternoon session of June 4th, E. L. Hopping, of the Philadelphia Electric Company, declared that the electric utilities have met the challenge of the past ten years by continually increasing capacity and improving economy in order to serve the nation faithfully. These advances, said Mr. Hopping in his paper entitled "Power Generation Advances," have been made in spite of lower rates, competition, and restrictive legislation.

Reviewing the decade's developments more specifically, Mr. Hopping cited the improvements in production which have resulted from the increased use and reliability of high-pressure, high-temperature steam production and generation equipment, so that fuel consumption per unit of output has been steadily reduced. Developments in turbine generators have been chiefly in refinements and details, he said, although the average size of new units installed has generally increased as systems expanded. A similar situation exists in the field of hydro-generation.

Within recent years, he indicated, high-pressure units have been superimposed upon old, less efficient units, rehabilitating them at relatively small total cost. Thus many plants that had been relegated to reserve use have been reclaimed by this means so that they are now available as base load plants and the investment in the original equipment has been made again useful for many years.

At the same afternoon session, H. R. Woodrow, vice president of the Consolidated Edison Company of New York, Inc., counselled utility executives to consider most carefully any proposed type of construction or system which might increase fixed charges or operating costs, and to be certain that the value of improvements to consumers will more than offset the increased expenditures.

Electric consumers in this country have been educated to a "Tiffany" quality of service, and in their efforts to make electric service more and more reliable the electric utilities have in some instances spent more for such protection from service interruptions than the increased reliability is worth to the customers, he suggested. The situation is further com-



The Washington Post

SOME FORCES ARE AS DESTRUCTIVE AS BOMBS

plicated, he said, by the fact that the companies are under constant pressure by regulatory authorities to maintain the utmost in service reliability while at the same time they are under continuous pressure to reduce rates.

The costs of extra equipment, duplicate construction, and refinement of operation necessary in maintaining the high degree of service continuity prevalent in this country are necessarily reflected in rates, he pointed out, and often it seems doubtful that the costs of such ultra-protected service are justified by the added convenience that such service offers. Referring to the advances made by the utility companies, Mr. Woodrow said:

> We have a right to be proud of our accomplishments, but I believe that we have been carried beyond a sound economic posi-

tion, even beyond a sound public relations position, in the field of the quality of service rendered.

VISUALIZING the business organization of the electric utilities as "finely balanced upon a tripod, the three legs of which are finance, labor, and the market," Paul M. Downing, vice president of Pacific Gas and Electric Company, told the utility executives that these "legs" might better be thought of in the human terms of investors, employees, and customers.

The public utilities have been far in advance of other lines of business in recognizing the importance of the human factor, he said, and have long devoted effort to creating and maintaining good will. He emphasized, however, that no cure-all formula for public relations has yet appeared nor is likely to appear, and the solution must lie in consideration of the people comprising the three "tripod" groups as individuals, with individual human rights.

Although customers far outnumber both employees and investors, and the business of utilities is serving customers, Mr. Downing warned against the inclination to focus upon this group to the exclusion or slighting of the others. They are all of equal importance, he declared, in sustaining the structure in complete and efficient balance.

He pointed out that the sending out of dividend checks does not discharge management's obligation to the investor. Additional accounting of stewardship should be given, so that the investor may understand that "there is a human organization standing guard over his money, doing its level best by the wisdom and skill of its administration to justify his own wisdom in making the investment." As a means toward this end he recommended the new "humanized" form of annual report which many companies are now issuing. The report, he said, "has lost none of its dignity, but it seemingly has discarded the old Mother Hubbard for a gown by Patou. It frequently is printed in color and is illustrated. Its text is simply written and informative. It seeks to induce the investor actually to know his company, to recognize his partnership interest in it, and to have toward it the same loyalty of ownership he would have toward any other property he might possess."

EMPLOYEES, the "second leg of the tripod," must be treated with the consideration that every man as a human being demands for himself, the West Coast leader said, reiterating that labor no longer is looked upon merely as a commodity to be measured in man-hours of work. Stating as obvious the fact that good public relations depend largely upon good employee relations, Mr. Downing reminded his fellow executives that loyalty in an organization begins at the top. "It is something that cannot be demanded and obtained by the issuance of general order," he said.

Discussing the "third leg," the customer group, Mr. Downing characterized utility relations with them as most productive of human problems. Too much importance, he asserted, cannot be attached to the treatment of customers in every communication, whether by personal call, letter, or telephone. All employees who meet customers are potent creators of good or ill will, he emphasized, and courteous letters answering complaints or requesting payment of bills often avoid losing friends unnecessarily. "We must accept complaints humbly and apologetically," he said, "and make an earnest and sympathetic effort to solve customer problems to the customer's satisfaction."

In the final analysis, however, Mr. Downing warned that utilities will be known by their acts, rather than by their publicity. Among services important in creating good will he included home-lighting surveys, adequate wiring inspection and advice, monthly bill surveys, and advisory engineering service. He concluded:

> Our immunity from attack by those who would socialize our industry depends not alone upon our defensive participation in political activities but more upon our winning such a high place in public esteem that the political seeds of distrust and dissatisfaction which may be strewn in our path will fall on barren ground.

ROBERT W. Leach, president of Unemployment Benefit Advisors, Inc., Washington, D. C., spoke on the subject of "Unemployment Experience Rating in Jeopardy." He stated:

> On April 30th of this year the balance in the Unemployment Trust Fund of the United States was more than $1,640,000,000. Whether that is too much or too little is entirely beside the point. What is important is that it represents funds no longer available to private industry. It must be remembered that this Trust Fund is the total of state deposits and that each such deposit is earmarked for a certain state. The adequacy of the reserves must be determined on the basis of the program in each state, not on figures which are totals for the entire country. During the first two years after benefits started one state paid out only 8.8 per cent of its total contributions, while in another benefits equal to more than 67 per cent of all that had been collected were paid out in eighteen months. Furthermore, experience during the period since January, 1938, has given no indication of the benefit drains possible during even a moderate recession of nation-wide scope. We can be sure of one thing, however, reserves of this size do become a great temptation.

Mr. Leach said it seems unfair that the funds of any employer who provides regular work and wages should be tapped for the purpose of subsidizing or supplementing the irregular wages paid by some other employer. However, he pointed out that advocates of individual experience rating and state unemployment laws faced two handicaps in their defense of that principle: (1) Lack of knowledge among top executives concerning even the simplest phases of the subject; and (2) the false sense of security arising from the mere fact that the laws of 40 states currently contain experience rating provisions.

On the morning of June 5th, H. L. Wallau of the Cleveland Electric Illuminating Company, discussed the marked advance in invention, design, and efficiency of electrical equipment of all kinds during the past decade. Decreasing revenues in the early thirties, coupled with pressure for lower rates and ever-mounting taxes, he pointed out, made it imperative that advantage be taken of every possible means for lowering the delivered cost of energy. The greatest immediate gains in this direction were lower costs of generation, but, Mr. Wallau warned, these reductions have now progressed to a point beyond which future gains will be increasingly difficult.

PERMISSIBLE overloads for equipment and circuits have been determined, so that margins of reserve have been reduced without sacrifice of dependability, he said, and interconnections of systems effected where economically feasible. "Economic advances have been made in all parts of our systems from coal pile to consumer's load."

During the same session Ralph Kelly, vice president of Westinghouse Electric & Manufacturing Company, observed that research and development of new materials and devices formed an important part of the electrical manufacturer's activity. He pointed to examples in which coöperation between manufacturers and utility companies has resulted in widening the uses of electricity and increasing its consumption.

In the field of electric service, as in every other industry, the methods and costs of distribution are of paramount importance, H. P. Seelye, senior engineer, Detroit Edison Company, reminded utility executives during the afternoon session of June 5th. Distribution facilities are important even from the viewpoint of public relations, he said, pointing out that poles and wires come into the residential customer's backyard and service equipment is attached to his house. For this reason, he suggested that it was worth while to make distribution structures attractive and harmonious with their surroundings.

The cost of distributing electrical energy is not out of line with that for other products, Mr. Seelye said. Including commercial cost (metering, billing, general expense, etc.) it accounts for 65 to 70 per cent of the retail price, he estimated, as compared with breakfast cereals at 50 per cent, raw cabbage at 82 per cent, and the average for all commodities in this country at 59 per cent. He emphasized the fairness of this proportion by citing the fact that in a large

electric system, facilities for delivering power from the generating plant to the residential customer account for more than 70 per cent of the investment required.

A PROGRAM of employee information that has proved amazingly successful as groundwork for better employee and better public relations was outlined to the utility executives by James M. Stafford, Jr., of the Georgia Power Company, in an address entitled "I Wouldn't Know about That"—the reply a poorly informed employee is apt to give to inquiries about his company.

The Georgia Power Company program was started three years ago with the conviction that better public understanding of the electric light and power industry could come only through better employee understanding. Success of the program, it was realized, hinged on its voluntary adoption by the body of employees. Practically all the company's employees are now enthusiastic about the program, Mr. Stafford said, making it an ever-developing, ever-widening influence for good throughout the company.

New methods of utility property accounting and their possible effects on the income and the equity capital of electric utility companies were the subject of two addresses delivered at the afternoon session of June 5th.

C. E. Kohlhepp, vice president and controller of the Wisconsin Public Service Corporation, and chairman of the Depreciation Committee, EEI, urged that utility managements give immediate attention to depreciation methods and ideas, so that a complete and fair understanding on this vital topic might be reached with public regulatory bodies.

Bernard S. Rodey, Jr., associate controller, Consolidated Edison Company of New York, and chairman of the Accounting Committee of the EEI, discussed the reductions in property valuations to "reasonable" figures which some state commissions are now requiring, and raised the question of whether the utilities were to be denied the right of including offsetting items of investment which were equally reasonable. If this right is denied, he said, utility accounting will become a "one-way street" and total book valuations will not reflect true worth.

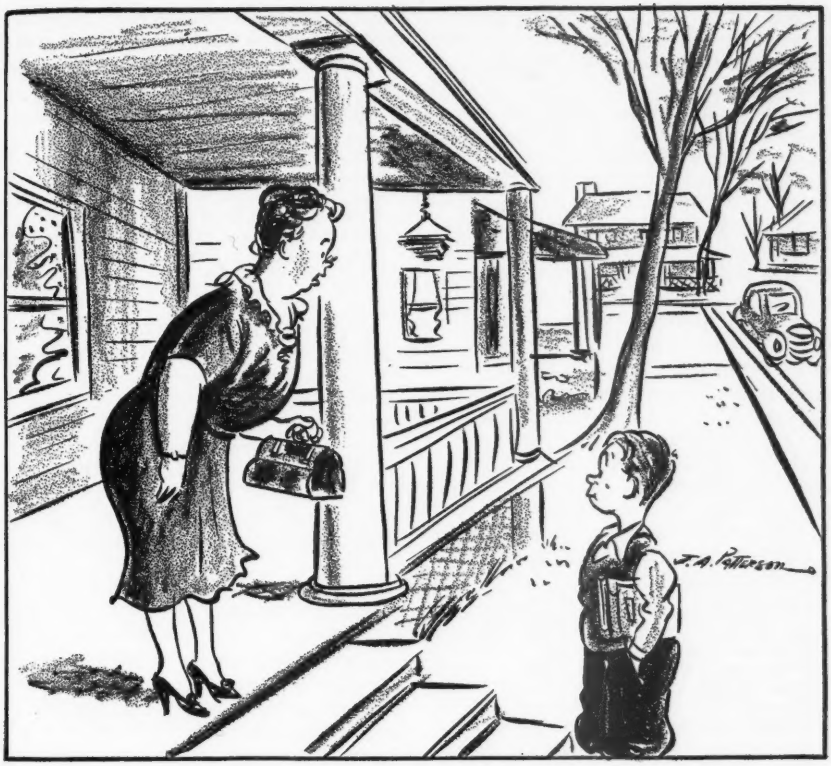
At the evening session on June 5th, Howard Coonley, chairman of the board, National Association of Manufacturers, called upon all believers in voluntary enterprise to defend it whenever they find the opportunity. He declared that economic freedom is as fundamental to American democracy as those other civil liberties guaranteed in the Bill of Rights.

DURING the morning session of June 6th, the Washington Water Power Company, of Spokane, Wash., was awarded the electric light and power industry's most honored symbol of accomplishment, the Charles A. Coffin Medal. The award, established in 1922 by the General Electric Company as a tribute to its late founder, Charles A. Coffin, is given annually to the company which has achieved the greatest accomplishment in the operation of its plant.

The Washington Water Power Company carried out in 1939 a remarkably successful and well-coördinated sales program which resulted in large sales of electrical merchandise and increases in electricity sales. The company's merchandise sales for the year averaged about $55 per residence customers, 90 per cent of the sales having been made by dealers. Residential consumption of electricity reached a total or 2,060 kilowatt hours per residence customer per annum.

The Washington Water Power Company also won the silver trophy offered by the National Electric Water Heating Council for the greatest contribution to the development of domestic water-heating load during 1939. The Consolidated Edison Company of New York, Inc., received the Augustus D. Curtis award for the greatest contribution to the advancement of artificial illumination of commercial and public buildings in the United States.

The B. C. Forbes prize for the best paper on public relations went to James M. Stafford, Jr., of the Georgia Power Company. The James H. McGraw prize



"HERE, STICK YOUR DAD'S LUNCH ON ANY BUS THAT COMES ALONG; HE'S BEEN SHIFTED TO 'LOST PROPERTY'"

for the best paper on engineering was awarded to V. G. Rettig of the Cincinnati Gas & Electric Company.

The George A. Hughes award of a silver trophy for the development of domestic electric cooking load was won by the Tampa Electric Company of Tampa, Fla. The Thomas W. Martin award, a bronze plaque for the greatest contribution to rural electrification, went to the Pacific Gas and Electric Company of San Francisco. Five other prizes, known as the R. B. Marshall awards, went to individual utility representatives for the promotion of domestic electric range utilization.

Also during the morning session of June 6th the convention heard Samuel Ferguson, president of the Hartford Electric Light Company, characterize as "illogical, unsound, and destructive" the methods and definitions being used to promote the "straight-line" theory of depreciation accounting for electric utility companies. Mr. Ferguson charged that advocates of government ownership are using "fifth column" tactics to induce public regulatory bodies to adopt rules which would cripple the privately owned companies to the point that they would no longer be able to render adequate public service.

In the past, he conceded, some companies using the "retirement accounting" method formerly prescribed by the commissions had paid out as dividends,

money which should have gone into reserves, but he denied that this was sufficient reason for changing to the straight-line depreciation method. The actual trouble lay in the abuse of the retirement method, rather than in its underlying principle, he said. Under the retirement method, reserves are set aside to cover property retirements as they are anticipated, while straight-line depreciation uses a mathematical formula to amortize the original cost of each item of property over its estimated useful life.

It is the failure to make the differentiation between depreciation already accrued and that which will or may take place in the future which is responsible for confusion and disagreement on the subject, he declared.

He acknowledged that amortization of property values by the depreciation method might be reasonably correct if the only causes for retirement were wear and tear or the gradual action of the elements, but emphasized that

> It is, however, preposterous to assume that we can know long in advance how soon new inventions will make obsolete what we have; or how long before pole lines must be taken down because of highway widening or because the town has grown into a city which by ordinance requires underground construction; or when and how often we will be visited by hurricane, earthquake, ice storm, etc. Yet if the service rendered by our companies is not to be impaired, advance preparation must be made to meet such events to the extent that the best of managerial judgment may direct. Further, because such preparation is primarily permitted and required in the interest of rendering proper service to the customer, any error of judgment should be on the side of too large rather than too small reserves.

CHALLENGING the assumption that "life tables" for property, based on experience, could be justly applied to the future, he commented:

> This might be so if conditions remained the same, but in an industry which has developed from nothing in the short space of fifty years, with one invention quickly superseding its predecessor and with the service changing from that of a luxury for a few to a universal necessity, it is obvious that history will not repeat itself.

Mr. Ferguson said that he agreed with the statement that all pieces of property retired should be paid for by the customers who used them, but asserted that "age-life" depreciation was not the only means of accomplishing this. He said:

> To me it seems self-evident that so long as a reserve, no matter how accumulated, is of sufficient size to care for all retirements and still stay in the black without being wholly depleted, then the property or properties retired have, in fact, been paid for by past users out of funds provided by them for the purpose, and that such retirements are not a burden on future users.

He denied that, to be consistent, utility companies must admit that their properties had depreciated to the same amounts as had been charged against depreciation expenses. If the reserve in its entirety does not represent present loss in value but is largely a provision against loss which may or will occur in the future, he said, then of course there is no validity in the claim that it should be wholly deducted as existing depreciation, or loss in value, in determining a rate base. He added that the customers, by providing the reserve in advance of the need for it, had of course acquired an equity in the reserve. This equity should be liquidated by allowing out of profits such accretions as the fund could earn if it had been invested in safe and liquid trust fund securities, he said. The company is in effect a trustee of these funds in the interest of the customer and in no sense does the fund represent a reimbursement to investors of their initial contributions.

UNDER accounting orders of the Federal Power Commission the utilities are now engaged in the expensive work of reclassifying their property accounts to separate the original cost of properties from the amounts paid in excess of cost by companies acquiring the properties from other companies, Mr. Ferguson said. A distinction between the two costs is in the best interests of all concerned, he stated, but declared that the utility companies could not agree that the acquisition cost be written off the books and not permitted to appear in the rate base.

The FPC in its order 42-A of July 11, 1939, has stated that such elimination of

acquisition costs from the books is "for accounting purposes only," Mr. Ferguson said, but he commented:

> We all understand the utter impossibility of obtaining in a rate case the arbitrary addition to the rate base of millions of dollars not even shown on the books of the companies.

He summarized his views on the question of acquisition costs by saying:

> In any rate case, this item should be disallowed if fraudulent or if so great as to deprive the acquired territory of all the benefits arising from the transaction. But if the company can show that the acquired territory benefited in quality or price of service at the time of acquisition to an extent that was the equivalent of a reasonable return on acquisition cost then the retention of the latter in the rate base is no more than a fifty-fifty division between company and user of the benefits created by the transaction. To forbid a reasonable return on acquisition cost in such a case is to require that in all mergers, purchases, etc., the entire benefit must go to the users in the acquired territory and none to the stockholders or customers of the acquiring company.

Mr. Ferguson concluded:

> Provided all factors are recognized there should be no difficulty whatever in reaching a logical and workable agreement. But as long as amortization of principal is sought under the camouflage of depreciation, and as long as the elimination of proper acquisition costs is sought in conjunction with the removal of such costs as are improper, just so long will the existing controversy and disagreements continue to plague both the industry and the regulatory authorities.

F. A. Newton, rate and valuation expert of the Commonwealth & Southern Corporation, at the morning session on June 6th discussed utility rates in a paper which will be later reviewed in this department. K. M. Robinson, head of the Washington Water Power Company, at the June 5th session told the convention that private capital should be used to the fullest extent possible for all the things that private capital can do, permitting every dollar of government money to be used for defense purposes.

At a luncheon session on June 6th, Alex Dow, veteran head of the Detroit Edison Company, entertained his audience with some personal reminiscences and philosophy in an address entitled "Some of My Prejudices."

How "Experience Rating" Reduces Unemployment Taxes of Public Utilities

PUBLIC utilities have an enormous stake in "experience rating" under the unemployment compensation laws. Forty states have provided a system of incentive taxation for financing and reducing unemployment. Under these laws employers who provide steady work may qualify for reduced payroll premiums, while employers who furnish irregular employment may be subject to the highest rate, which runs to 4 per cent of the payroll in some states.

Potential tax savings under the experience-rating provisions of the various state laws range from $12 per $1,000 of payroll in Connecticut to $40 in Wisconsin and Hawaii. The savings available in the 40 states now having experience-rating provisions in effect are indicated in Table I.

TABLE I

POTENTIAL PAYROLL TAX SAVINGS

Savings per $1,000 of Payroll	*No. of States*
$12.00	1
15.00	1
17.00	4
20.25	1
21.16	1
22.00	2
25.00	1
26.00	3
27.00	12
30.00	3
31.00	2
35.00	2
35.65	1
36.00	1
37.00	1
40.00	2
?	2

The Federal-state system of unem-

ployment compensation was instituted in the United States to encourage wide experimentation and adaptation of state laws to local conditions. No two of the 51 laws are alike. Not only is there this considerable variation in tax savings available to employers who provide steady work, but the maximum and minimum rates vary from state to state, as indicated in Table II:

TABLE II

MAXIMUM AND MINIMUM UNEMPLOYMENT COMPENSATION TAX RATES

Minimum Rates		*Maximum Rates*	
Rate	*No. of States*	*Rate*	*No. of States*
0	6	2.7	11
.135	1	3.2	2
.5	6	3.6	14
.54	1	3.7	2
.675	1	4.0	9
.9	10	?	2
1.0	12		
1.5	2		
1.7	1		

Under this set-up employers of two states with the same potential tax savings may have, nevertheless, entirely different minimum and maximum rates. This is true, for example, in the cases of New Mexico and Minnesota, where employers may save up to $27 per $1,000 of payroll. Yet, the respective minimum rates for the two states are .9 per cent and .5 per cent, and the respective maximum rates are 3.6 per cent and 3.2 per cent.

ALTHOUGH reduced payroll taxes are in effect only in Wisconsin (since 1938), Indiana, South Dakota, and Nebraska (these three since 1940), in virtually every state, if not every one, the record of employment in 1940, and in some states 1941 and 1942, will determine the tax rate which the individual employer will have to pay when reduced tax rates become effective in his state. In other words, while reduced tax rates do not become generally available to most employers until 1941 or 1942, the employer is *now* determining by his employment policy what those tax rates will be in subsequent years.

For the future the employment record of one or more previous years will continue to determine the tax liability of the current year. For this reason, the provision of more continuous employment for even one additional employee may lead to subsequent tax savings and a better profit position.

Every employer should familiarize himself, as well as everyone in his organization from foreman to top officials, with these potential tax savings. It is surprising to discover how many ideas for employment regularization will flow from numerous people in the company,

TABLE III

EXPERIENCE OF PUBLIC UTILITIES IN WISCONSIN*

(Record through June 30, 1939)

Type of Industry	*Percentage of Premium Contributions Withdrawn As Unemployment Benefits*		
	Industry As a Whole	*Best Company*	*Worst Company*
Taxicabs	3.2	0.0	44.5
Telephone communication	3.0	0.0	40.2
Telegraph communication	10.4	9.4	10.6
Electric light and power	6.9	0.0	81.4
Gas, heating, and illuminating	9.4	0.0	17.2
Electric light and power and gas combined	6.6	2.8	21.3
Water supply systems	26.5	0.0	103.9**

*Data from Wisconsin Industrial Commission.

**Although Wisconsin has an employer reserve system of unemployment compensation, the law provides for a small pooled account from which unemployment benefits are paid to employees of employers whose accounts become overdrawn, so that no employee is deprived of legal benefits.

once everyone in the organization is made aware of these tax savings.

In Wisconsin the public utilities have for the most part qualified for the zero or one per cent premium rate, although there is considerable range for the different types of utilities and for the individual establishment, as shown in Table III (p. 816).

In every one of the seven categories, except that of electric and gas combined, one or more employers have established a record of having paid no unemployment benefits. In the case of the electric light and power industry, twelve employers, out of a total of twenty-nine reporting to the state, have paid no unemployment benefits. It would seem that the degree of employment regularity obtained by these twelve could be approximated by the others.

The writer has had occasion to interview scores of Wisconsin employers and from this study it is obvious that the excellent records of stable employment achieved by many of these employers is traceable to the interest which top management has taken in the matter.[1]

Experience rating is under attack from some quarters but it would appear that its primary aim of greater employment regularity is being achieved to a considerable degree.[2] Public utilities are to a considerable degree naturally stable; and, since they contribute most to steady employment, there is good reason why they should be eligible for reduced premiums for financing unemployment. If experience rating is to be retained in the forty states, and extended to the others, the utility industry should become more active in this program.

—EMERSON P. SCHMIDT,
Professor, University of Minnesota.

[1] The American Legion has become sufficiently impressed with the possibilities of providing greater employment regularity, that it has authorized a vigorous program of action. As a result, the Minnesota Legion is issuing a continuous series of loose-leaf case histories of successful employment regularization. These are mailed to employers at the rate of one to four a week, on the theory that as these flow over the desks of the personnel and plant managers, treasurer, controller, and other company officials, ideas and techniques adopted by other employers will strike the reader as being practical in his business. Headquarters of this activity is American Legion Employment Stabilization Service, Austin, Minnesota.

[2] For a comprehensive review of the effect of experience rating on employment regularity, see: *Personnel* Vol. 16, May, 1940, pp. 163-74.

Notes on Recent Publications

CONSUMERS' ACTIONS AGAINST PUBLIC UTILITIES TO ENFORCE PERFORMANCE OF PUBLIC DUTIES. Maxwell *v.* Ohio Fuel Gas Co. (Ohio) 38 *Mich. L. Rev.* 564. Feb., 1940.

THE NORRIS PROJECT. Technical Report No. 1. Released by the Tennessee Valley Authority. Sold by the Superintendent of Documents, Washington, D. C. Cloth-bound, $1.50.

This report was prepared for the purpose of giving to the engineering profession important and useful facts about the planning and construction of the Norris dam and reservoir. The volume, first of a proposed series of TVA technical reports, contains 840 pages of text and 375 illustrations. To make this report of greatest use to those engaged on similar projects, relatively little space was devoted to such parts of the work that followed well-established engineering practice, but novel or unprecedented features have been described in detail.

Among the topics covered in this report are: History of the Tennessee river development; the Norris project investigations; social and economic studies in the Norris reservoir region; dam and power house designs; access roads; employee housing; construction plant; river diversion; construction methods; analyses of construction costs; size of various construction crews; highway, railroad, and other adjustments made necessary by the creation of the reservoir; initial operations; unit costs; and total construction costs. The appendices include a statistical summary of the physical features of the project; copies of the engineering and geologic consultants' reports; details of the design, models, cement, and aggregate studies; specification forms; allocation of project costs; TVA employee relationship policy and wage rates; and the Tennessee Valley Authority Act. The report also contains bibliographies on each phase of the work.

The March of Events

Defense Plan Urged

INTEGRATION of all Pacific Northwest power facilities for national defense purposes was recommended recently by Paul J. Raver, Bonneville Power Administrator, to Secretary of the Interior Ickes. Raver asserted:

"If we are to be prepared to meet the power demands of the national defense program, with its inherent industrial expansion, it is necessary that we accelerate the completion of the interconnection of the government plants on the Columbia river with all existing utilities in the area."

Raver recommended to Ickes that immediate steps be taken to:

Accelerate completion of the Bonneville interconnection with Tacoma and Seattle, Wash.; build a second power line into the Grays Harbor area of western Washington via Olympia and the Cushman plant of the Tacoma city light department; provide for complete interconnection of Grand Coulee and Bonneville dams with the plants in the Spokane, Seattle, and Portland areas through the construction of additional transmission lines; provide funds for feeder lines, industrial substations, service facilities, and other improvements "essential to efficient operation."

Raver also recommended steps to speed up installation of generators at Bonneville and Grand Coulee dams.

Paul B. McKee, president of Pacific Power & Light Company, said Raver's proposed interconnection of Pacific Northwest power plants appeared "to be in line with the coöperative program we have discussed at various times with officials of the Department of the Interior, and carried out on a businesslike basis, it can be of the greatest value to the development of the region."

Frank McLaughlin, president of the Puget Sound Power & Light Company, endorsed the interconnection suggested by Bonneville Administrator Raver. He pointed out that he spoke in favor of such a development last September when he returned from England, where he had an opportunity to study firsthand the working of the British grid system.

NARUC Tenders Coöperation

THE coöperation of the National Association of Railroad and Utilities Commissioners in the prosecution of the national preparedness program now going forward was tendered to President Roosevelt on May 29th in a telegram from the president of the NARUC, Harry Bacharach, who is also president of the New Jersey Board of Public Utility Commissioners. The telegram was in part as follows:

"In any program for national preparedness the coördinating and expanding of the nation's public service facilities must have an important place.

"As president of the National Association of Railroad and Utilities Commissioners I tender you, in forwarding a program for national preparedness, the complete coöperation of the state commissions banded together in this organization. Beyond that I need not hesitate to assure you the equally complete coöperation of the enterprises subject to our jurisdiction.

"Without unified effort in the fields of providing electric energy, water, transportation, and communication, no program of preparedness can accomplish maximum results. Where national interests are at stake we know no state lines, though otherwise zealous to maintain state control of matters that in our judgment under normal conditions and viewed from any standpoint other than that of national preparedness are primarily of state as distinguished from interstate interest and concern. Preparedness is a single objective to be accomplished only by centered, common, coördinated effort, public and private, state and national, upon a national basis. . . . "

Raver Aide Appointed

ULRIC J. Gendron, who has been identified with the Bonneville project since its inception in 1935 as PWA Project No. 28, on May 29th was appointed by Secretary of Interior Ickes as assistant administrator of the Bonneville Power Administration.

Gendron came to Portland, Or., in 1937 as executive assistant to the administrator, then the late J. D. Ross, and continued in that capacity under Administrator Paul J. Raver. The new job was created by Congress this year.

Gendron has been a civil service career man for twenty-eight years.

Municipal System Operation

SCRUPULOUS fairness in protecting the interests of both taxpayers and electricity users was urged recently on cities operating

municipal electric systems by Dr. William A. Dittmer, chief of the Bonneville Power Administration's system planning and marketing division. He spoke before the joint meeting of the League of Oregon cities and affiliated groups at Seaside, Oregon.

The Bonneville official outlined principles of municipal system operation recommended by the Bonneville Administration as the result of several months' joint study with Northwest municipal utility managers. Dittmer charged:

"Opponents of the Bonneville program have attempted to make political capital out of the slogan that Bonneville is attempting to impose bureaucratic control over municipal plants in the Northwest. Those of you who have met with us, negotiated with us, and have talked with us about our common problems know that that is untrue."

New Offer Made Co-ops

A NEW offer by the Northern States Power Company for supplying power to Northwest coöperatives financed by the Rural Electrification Administration represents a basis on which an agreement can be reached, the REA said recently.

Harry Slattery, REA administrator, informed REA coöperatives in Minnesota, North Dakota, and South Dakota that if the company would stand behind new offers by submitting contracts "in proper form, and without adding further objectionable clauses, it will be possible for REA to approve these contracts."

The agency and the company have for some time engaged in a rate dispute. In the new offer, the REA said, the company omitted the last of the clauses—an annual demand clause—to which the agency objected, and substituted a monthly demand clause.

Slattery said that while the offer established a rate higher than the REA systems are paying to many other utilities, nevertheless it represented a basis on which the REA and the company could agree.

House Tables TVA Bill

THE House Military Affairs Committee on May 29th voted 12 to 10 to table a bill authorizing the appropriation of Tennessee Valley Authority funds to reimburse Tennessee local governments for the tax revenues paid heretofore by private utilities which were absorbed by the TVA.

The amount involved was not mentioned in the measure, but it was said to run well over $1,000,000 a year. Unless the House overrides the committee and the Senate accepts it, the recent action meant that the state of Tennessee and a number of its cities and counties, as well as some local governments in other jurisdictions, would stand to lose large amounts.

Arizona

Electric Rates Reduced

LOWER gas and electric rates for the Tucson district were announced last month by the state corporation commission, effective June 1st.

Max Pooler, general manager of the Tucson Gas, Electric Light & Power Company, filed the new rate schedule with the commission and Chairman W. M. Cox said the company estimated consumers would save $128,000 annually.

Pooler reported that the rates for residential electricity were the lowest in the Southwest.

Arkansas

Gas Firm Seeks Refund

THE Camden Gas Corporation, contending it is entitled to the same wholesale rates granted a similar distributor at Minden, La., filed suit for $142,798.37 against the Arkansas Louisiana Gas Company in Pulaski Circuit Court late last month.

The complaint said the figure represented the difference between the amount it had paid for 1,272,620,000 cubic feet of gas bought from the Arkansas Louisiana Company and the amount it would have paid had it been charged the same rates granted the Empire Southern Gas Company of Minden between January, 1933, and July, 1939.

Both utilities contracted with a predecessor company of the Arkansas Louisiana firm which continued the contracts when it was organized in 1934, the complaint said. The Camden Company said it had been purchasing gas wholesale under a 1927 contract at a rate ranging from 12 to 25 cents per thousand cubic feet. The Empire Southern Company, the complaint alleged, was granted a rate under a 1933 contract for purchase of gas at 8.5 cents per thousand cubic feet in 1933, 9.5 cents in 1934, and 11.46 cents thereafter.

California

Grants "Breathing Spell"

SECRETARY of Interior Ickes last month agreed to grant San Francisco the Hetch Hetchy power "breathing spell" which two delegations went to Washington to get. Having agreed to it himself, he set in motion steps which paved the way for Federal District Judge Roche to do the same thing legally and officially.

The Secretary told the delegation of San Franciscans that he would not stop sale of electric energy to Pacific Gas and Electric Company prior to August 1st, on condition that San Francisco as a municipality took immediate steps to negotiate with PG&E a new lease contract containing an option to purchase power distribution facilities in the city.

Word of the "breather" was hailed locally as a signal achievement, despite creation of a new problem among the budget makers.

Federal Judge Roche on May 28th made the stay legal and official in Sacramento, where he was sitting temporarily, and at the direct request of U. S. District Attorney Hennessy, City Attorney O'Toole, and Assistant City Attorney Dion Holm.

City Attorney O'Toole and Utilities Manager Cahill were then expected to initiate conferences with President James B. Black of PG&E toward a new lease arrangement. In the event a leasing arrangement can be achieved which will satisfy Secretary Ickes, the problem will have been overcome, but, if not, it appeared that the city would have to seek a charter amendment and submit a new municipal power distribution system bond issue to the voters.

Georgia

Company Aids Usury Fight

THE Georgia Power Company, Atlanta's largest employer of labor, last month gave official notice to all employees that it was coöperating with the drive of the bar association against loan sharks.

A notice enclosed with pay checks advised any employee in the toils of money lenders to communicate with the usury committee of the bar association and follow its advice in gaining freedom from exactions which, in some instances, have reached 520 per cent interest per year.

The notice promised the company would not "discharge, suspend, or criticize any employee carrying out these recommendations, but every opportunity will be given its employees to defend their rights." It also promised to defend any employee's legal rights.

Illinois

Court Orders Gas Refunds

CIRCUIT Judge George Fred Rush entered a court order on May 24th directing the Peoples Gas Light & Coke Company to begin refunding $6,377,242 acquired from 850,000 Chicago domestic gas consumers through a rate increase which has been invalidated by the courts.

Judge Rush directed the company to make the rebate by check and to have the first 100,000 checks in the mails not later than September 1st. The company is to continue sending out checks at the rate of 100,000 a month until all consumers have received their refunds May 1, 1941.

The company was required to itemize excessive billing by months since the increased rate was put into effect February 4, 1938, under protection of a permanent injunction issued by Circuit Judge Stanley H. Klarkowski. The itemization is to be made on a slip attached to each check, and the customer is given sixty days after receipt of his check to protest to the circuit court regarding discrepancies in the amount refunded.

The gas company is authorized to deduct from the checks any offset for overdue bills, but not to deduct the amounts of current bills. The customer, on the other hand, is required to pay his current bills and may not deduct them from the amount he computes is due in refund.

George A. Ranney, chairman of Peoples Gas, estimated that the average refund would amount to approximately $6.

Rate Cut Announced

THE state commerce commission recently announced that rates of the Central Illinois Light Company would be reduced July 1st, effecting a saving of $166,000 annually for consumers.

Chairman William W. Hart said the reduction, saving residential customers $116,700 and

commercial users $49,300, came as a result of conferences.

The company serves Peoria, Peoria Heights, East Peoria, Pekin, De Kalb, and Sycamore.

Louisiana

Prompt Payment Required

STRICT enforcement of an ordinance requiring that bills for use of water and light from the municipal plant at Lafayette be paid by the tenth day of each month was called for in an ordinance recently adopted by the city trustees.

The measure, introduced by Trustee of Property Wilson J. Peck, provided that a list of present delinquents be prepared and service discontinued unless such accounts be settled. The resolution stated:

"The individual trustees have no discretion whatsoever with reference to the enforcement of provisions of the ordinance, and the fair and impartial enforcement thereof is necessary to the proper business administration of the municipally owned utilities."

P. J. LeBlanc, trustee of finance, said those delinquent in their light or water bills would be given an opportunity to pay.

Minnesota

Permit Extension OK'd

A 5-year extension of St. Paul's operating permit for the Northern States Power Company, continuing electric, gas, and steam rates at present levels, was voted informally recently by the council and Mayor McDonough.

Importance of the action was said to be that it practically assured construction by the company of a $4,500,000 50,000-kilowatt generator addition to its High Bridge plant. Plans for the plant addition were said to be completed, and power company officials announced that work would begin as soon as the extension permit was formally approved to permit financing.

The present 5-year permit expires December 31, 1941. The informally approved extension would begin on that date. The council instructed the utilities committee to include three reservations in the permits. These were:

Provision for adjustment of electric, gas, and steam rates annually.

Submission by the power company to the council of a 5-year franchise for vote of the people not later than 1944.

Adjustment of electric rates to the city for the city hall, county jail, library, municipal auditorium, and public safety building.

Ohio

Rate Compromise Accepted

BY a vote of 20 to 13 the Cleveland city council recently approved the compromise with the Cleveland Illuminating Company calling for a system-wide rate reduction totaling $1,378,000 a year for four years. The reduction will go into effect forty days from passage of the new rate ordinance, or Saturday, July 6th.

It will mean an annual saving of $778,500 to customers within the city of Cleveland and a saving of $599,500 a year to CEI customers outside Cleveland, the majority of them living in the city's immediate large suburbs.

It was estimated that, depending on the size of the monthly light bill, electricity users would benefit by reductions ranging from 3 to 13 per cent of their present bills. The new monthly rates are as follows: 4 cents for first 35 kilowatt hours; 3 cents for next 65 kilowatt hours; 2.25 cents for next 150 kilowatt hours; 1.5 cents for all over 250 kilowatt hours.

Plant Quiz Urged

AN effort to halt the Cleveland city council utilities committee investigation of delays and blunders in construction of the new municipal light plant and to invite the state examiners to make such an investigation was begun late last month by Councilman William J. Rogers (R.).

Rogers made a motion to that effect at a utilities committee meeting, but Councilman Victor Cohen (R.), committee chairman, held up the move by arguing that the committee should at least get a part report of its own investigation and that the examiners probably would not be interested in making such a move until the light plant had been built.

Rogers had a formal resolution calling on the examiners to make such an investigation drawn up and introduced it in the council. It was referred to the utilities committee for approval or disapproval.

Increased Levies on Utility Earnings Urged

INCREASED levies upon the gross earnings of utilities with such revenues used for financing more speedy and economical disposition of rate controversies, were recommended recently by George C. McConnaughey, chairman of the state utilities commission.

In support of his recommendation, the chairman pointed out that a sufficiently large staff maintained by the commission would enable the commission to make its own investigations of such items as production costs and property valuations, which would permit the disposition of rate cases at a cost of approximately $100,000, as against present costs ranging from $600,000 to $700,000.

Specific levies, he said, would not be submitted to the legislature until such time as the commission had completed a survey of the situation. At the present time the commission's operations are financed through a gross receipts tax upon utilities amounting to $200,000 prorated among the various utilities. Over a period of years, however, the legislature has never seen fit to appropriate the full amount of this tax for the commission's operations, the difference between this tax and the appropriations having accrued to the general revenue fund.

Oregon

Deal to Proceed

GUY C. Myers of New York, fiscal agent for Cowlitz County Public Utility District No. 1, was instructed last month to proceed with negotiations for the purchase of the Washington Gas & Electric Company holdings in this county at a closed meeting with the PUD commissioners.

The commissioners had previously entered into an agreement with Myers to have him conduct negotiations toward purchase of the Longview and Ryderwood utility properties.

Under the present plan, the Longview water system and the Washington Gas & Electric Company building would be included in the purchase. They were not included in the condemnation action tried in the Tacoma Federal court.

PUD Plans Hit

THE Lane county PUD campaign lost its chief motivating force recently when the Lane county Pomona Grange executive committee, which had been handed the once-defeated PUD problem, resigned and no committee was later named to take its place.

Plans to call another PUD election for the November ballot were thus quashed. The original grange power committee, which organized the unsuccessful campaign for the PUD earlier this year, was voted out, and the power committee's functions and duties were turned over to the grange executive committee at the recent meeting. The executive committee then unexpectedly resigned without explaining its action.

It was explained by members following the meeting, however, that the belief had grown that the Federal rural electrification set-up could better serve rural power users than a PUD system under the present laws. The REA program has already been put into force in several regions which originally sought power through a public utility district.

The grangers also passed resolutions supporting the Lane county court in its endeavors to obtain additional Federal funds in lieu of taxes lost by reason of Federal ownership of numerous pieces of property formerly taxable by the county, and urged establishment of a power authority similar to the TVA as soon as Grand Coulee dam is completed.

Pennsylvania

Appointed to PUC Vacancy

GOVERNOR James on May 29th appointed B. Frank Morgal, an employee of the state public utility commission since 1914, as a member of the commission to fill a vacancy. Morgal was chief of the bureau of accounts and was named on the PUC to succeed Denis J. Driscoll, who resigned to become a trustee in the Federal reorganization of the Associated Gas & Electric system. The term expires in 1947.

Morgal's appointment gave Republicans a majority on the commission for the first time since Governor James assumed office in 1939. In announcing the appointment the governor said that it was nonpolitical and that the best recommendation Morgal had was his record as a state employee.

South Carolina

Formulate Plans

ANOTHER step was taken at Columbia recently looking towards the taking over by county coöperative associations of the rural electric lines constructed by the central State Rural Electrification Authority. A group of officials of the Federal REA were in Columbia for conferences with Governor Burnet R. Maybank, other members of the state REA, and representatives of the coöperative associations.

Allen Moore, of the Federal REA's legal division, said that a standard plan to govern the transfers of the lines would be discussed. Mr. Moore was acting as coördinator among the three units involved—the Federal government, the state REA, and the several coöperatives.

This was considered about the final step towards abandonment in the state of the use of a central state authority as the medium for building rural electrical lines financed with Federal funds.

Tennessee

TVA Plans Rural Expansion

J. A. Krug, chief power engineer of the Tennessee Valley Authority, recently announced plans for 8,000 miles of rural electric lines to service about 32,000 new farm customers in Tennessee. The Rural Electrification Administration will spend $6,000,000 on the lines, to be completed before July, 1941.

Krug also announced a rural electrification survey to be carried out by farmers under guidance of REA. The REA has agreed to reduce existing minimum revenue guaranties to $8.50 per month per mile and $10 per month per mile where amortization charges are not applied. Previous guaranties were $12 and $18.

Texas

Quits Chain Tax Fight

THE Lone Star Gas Corporation of Dallas on May 29th formally accepted the findings of Texas higher courts making it liable for the chain store tax based on the ownership of its subsidiaries and caused the dismissal in the third court of civil appeals of the appeal from an adverse judgment in Williamson county.

Immediately previous to moving for dismissal, the company and its subsidiaries paid all chain store taxes claimed from 1936 through 1939 and attached the comptroller's receipt as an exhibit. The amounts thus paid were as follows: Community Natural Gas Company, $8,986; Texas Cities, $4,112; Lone Star, $1,103; Dallas Gas Company, $1,543; and County Gas Company, $886, a total sum of $16,630.

Utah

Dealers Get Appliance Trade

IN the avowed interest of quickened "industrial mobilization under the national defense program," the Utah Power & Light Company was prepared recently to relinquish to independent dealers its business in electrical appliances.

George M. Gadsby, company president, said that hereafter the personnel would concentrate its energies upon providing electric service for industries, commercial establishments, homes, and farms of the area it serves. Company outlets will handle only lamps and small items for customers' convenience. Gadsby said:

"It is necessary in meeting production requirements that there be an adequate and dependable supply of power so as to meet emergencies and anticipate future needs. To accomplish this objective will require financial resources as well as the time and energy of each trained, experienced executive and key man in our organization. For that reason none of them will be able to find time properly to direct large merchandising activities."

Washington

Electric Rates Cut

NEW rate schedules cutting residential and commercial costs 22 per cent, industrial rates 11 per cent, and costs to cities, schools, and churches by 25 per cent were announced recently by the Grays Harbor Public Utilities District commissioners.

The reductions, effective July 1st, were ordered on recommendation of Manager Robert W. Beck after an exhaustive survey of Harbor rate schedules. He estimated the new schedule would save Harbor electric consumers $150,000 the first year. The rates were based on power produced at the company steam generating plant, not on Bonneville power.

District Seeks RFC Funds

PUBLIC utility district commissioners of the Puget Sound area recently voted to apply to the Reconstruction Finance Corporation through the Washington State Grange for funds with which to purchase properties of the Puget Sound Power & Light Company.

The action was taken following detailed reports by Jack R. Cluck, PUD attorney, and Erwin King, State Grange master, on conferences at Washington, D. C., with government officials and in New York with investment bankers.

Commissioners from 10 counties were in attendance and the vote showed sixteen favoring the RFC application, two opposed, and three withholding their votes.

The application through the grange was necessary, it was stated, so that the RFC would have before it a definite request for funds.

Access to Records Denied

A STATE public service department order, giving public utility districts and the state grange access to the records of the Puget Sound Power & Light Company's records, "for rate-making purposes," was thrown out last month by Superior Judge John M. Wilson.

In a memorandum the court reversed the order "for the reason it is untimely, unreasonable, arbitrary, and contrary to law."

The power company had been ordered by the state public service department to give properly accredited and technical representatives of the PUD's "free and unobstructed access to all its records and properties."

The court held it was apparent "the real and only purpose of the proceedings was to enable the complainants to obtain information for the prosecution of pending condemnation cases."

PUD Enjoined

IN a pair of memorandum opinions last month, Superior Judge Witt enjoined the Lincoln County Public Utility District No. 1 from condemnation of facilities of the Washington Water Power Company.

In granting the injunction requested by the power company at a hearing recently held at Davenport, Lincoln county, the judge held the acquisition would necessitate the furnishing by the district of power to 138 customers in Grant county and 82 customers in Spokane county outside the limits of the district since service lines operate from substations inside the district.

The opinion said these customers never had any say about the formation of the district; had not expressed any desire to be included therein; would be deprived of the protection of the public service department in the matter of regulation of rates and service; and would have no voice in the management of the affairs of the district.

Council Speeds Cut

THE Seattle city council, Chairman Levine said recently, would draft an ordinance to give City Light users a $200,000 annual rate reduction. The rate cut announced on May 27th by Lighting Superintendent E. R. Hoffman, the council, and Mayor Arthur B. Langlie, will go into effect this summer.

Wisconsin

Gas Firm Seeks Lines

A PETITION of the newly incorporated Wisconsin Natural Gas Company was filed with the state public service commission on May 28th to get the state's consent in constructing a pipe line to bring natural gas from Kansas to Madison.

Articles of incorporation for the utility also were filed on the same day with the secretary of state by three Madison attorneys, acting upon behalf of Paul Kayser and C. C. Cragin, officials of the El Paso Natural Gas Company. The articles of incorporation provided for $50,000 capital stock.

The company has been incorporated to acquire, transfer, process, sell, and deliver gas, natural or artificial, to be used for lighting, heating, cooking, or power. The new corporation asked authorization to install pipe lines in Wisconsin and other equipment incidental to transportation and distribution of natural gas.

The Latest Utility Rulings

Statute Requiring Commission Approval of Contracts between Affiliates Upheld

A COUNTY court of common pleas in Pennsylvania denied relief to a public utility seeking to enjoin enforcement of a statute requiring commission approval of contracts between public utilities and affiliated interests. The court ruled that the statute was valid and did not constitute an unlawful delegation of power.

It was held that the state may lawfully require commission approval of contracts between public utilities and affiliated interests and that such requirement does not unreasonably interfere with the utility's right to manage its own business. The court said with respect to this:

> The intimate and interlocking relationships existing between affiliated companies tend to prevent arm's-length dealing. They are conducive to preferential treatment, discriminating practices, and contrived results in favor of one company or the other as the controlling parties may desire. They are apt to be devoid of those business considerations which make each company strive to promote its own interests. There is an absence of that conflict of interests between companies which impels each to drive the best bargain possible. On the contrary, a situation exists which makes manipulation possible to the advantage of one company or the other. Were the public interest not involved, there would be no right to regulate such contracts. But since the rates, service, and financial status of a public utility may be affected by such contracts, it is proper that they be scrutinized for the public good.

Furthermore, the court said that such a statute contained a standard to guide the commission in granting or refusing approval; namely, public interest and the general well being of the state. Therefore, it did not constitute an unlawful delegation of power.

The plaintiff had contended that the section of the statute imposing fines and penalties for violation of the act deprived it of equal protection of the law or of its property without due process of law. The court held otherwise, ruling that the fines to be imposed were not excessive. In conclusion the court said:

> The argument that such penalties tend to prevent a person from seeking legal redress we deem of little importance. This case is proof of the fact that disputed questions may be litigated in court in a bona fide effort to clarify the law without incurring any penalties. Neither the effect of the act upon the management of the company nor the penalties provided can be said to deprive the plaintiff of the equal protection of the law nor of its property without due process of law, in violation of XIV Amendment to the Federal Constitution.

Bell Telephone Co. v. Driscoll et al.

SEC Consents to Submit Tentative Conclusions On Integration

AMONG other orders of the Securities and Exchange Commission commencing proceedings under § 11 of the Holding Company Act, to bring about simplification of corporate structures, was an order directed at the United Gas Improvement Company. This order, like the others, recited that the commission had examined the corporate structure of the company and its subsidiaries; contained allegations relating to the relationship and types of business; stated that it appeared that the holding company system did not meet the integration

requirements of § 11; and directed the respondents to file their joint or several answers admitting, denying, or otherwise explaining their respective positions with respect to the allegations. In the same order the commission directed that a hearing be held on the matters involved.

The United Gas Improvement Company and various of its subsidiary companies filed an answer reciting, among other things, that it had not been advised that the commission had made any determination or contemplated determinations under § 11(a) with respect to its system; that there could be no proper hearing pursuant to § 11(b)(1) until after the receipt of advice by it from the commission as to what action the commission proposes to direct; and that the commission's recitals and allegations to the effect that the system's operations are not confined to a single integrated public utility system did not constitute the notice contemplated by the act because they merely stated conclusions in the negative, failed to specify which part, if any, of its system lies outside the single integrated system, and failed to specify which business, if any, was not incidental or necessary to the operations of such system. The commission, after hearing arguments, concluded:

> Plainly no order can be entered under § 11(b) (1) until adequate notice has been given and opportunity for a full hearing has been afforded. Adequate notice, in our view, is notice which fairly advises the parties, at some appropriate time, of the tentative views of the commission. "Opportunity for hearing" represents, in our opinion, opportunity to present evidence and to be heard upon the issues in the proceeding.
>
> We consider the notice already given as adequate at this stage of the proceeding. Nevertheless, since the respondents have requested a recitation of the commission's tentative conclusions, together with a full description of "such action as the commission has tentatively concluded to be necessary under the provisions of § 11(b) (1)," at the outset of the proceeding, and since no person could be injured by such statement, we are willing to enlarge our original notice. Expedition is in the interest of all parties concerned, and we are inclined to agree with the respondent that the issuance of the supplemental notice at this time will probably expedite the conduct of this proceeding. The respondents will, therefore, be informed as to what action we tentatively believe compliance with § 11(b) (1) requires, and will be given a full opportunity to introduce evidence and to be heard on those tentative views.

Re The United Gas Improvement Co. (File No. 59-6, Release No. 2065).

Promotional Rates Adopted to Improve Gas Company's Revenues

THE so-called "flat rate," often referred to as the straight rate, is considered obsolete under accepted modern rate practice. Therefore, in approving new rate schedules to increase the revenues of a gas company, the Massachusetts Department of Public Utilities substituted a block rate providing for a 75-cent charge for the first 200 cubic feet or less per month and rates for subsequent blocks graded down to a minimum of 6.5 cents per hundred cubic feet for consumption over 500,000 cubic feet per month. A minimum annual bill of $7 was also provided.

The charge formerly in effect to household customers was $1.25 for each thousand cubic feet of gas sold and delivered up to 10,000 feet. Criticizing this straight rate, the department said:

> It has the obvious disadvantage of failing to provide an incentive to larger individual customer use and it constitutes an actual discrimination in favor of the occasional or "convenience" user. Another weakness of the flat rate is that it necessitates a large and disproportionate expense in billing and bookkeeping accounts due to the substantial number of customers involved whose monthly consumption is merely nominal.

The company, operating in an industrial district hit by the depression, had for several years experienced gradually decreasing gross revenues, as well as net income. The immediate need, therefore,

in order to maintain the financial stability of the company in such a condition as to assure a continuity of the kind of service to which its customers were accustomed, was said to be to establish tariffs which would promote larger individual consumption of gas by the average retail customer by offering progressive reductions in prices as larger amounts are used. These would effectively reduce the amount of present losses resulting from the sale of gas to customers whose monthly bills were so small that they did not pay their own way.

The company had proposed a block rate starting at $1 for the first 200 cubic feet, but the department viewed this as to sharp an upward revision, calculated to foster an unfriendly attitude toward the company which might conceivably result in the loss of more customers than the company anticipated. The commission was moved to look upon the substituted rate schedules not entirely as an increase in prices but more in the light of a fairer distribution of charges allocable to the expense of servicing the average customer. *Re Haverhill Gas Light Co. (D.P.U. 5956).*

Water Company Must Furnish Adequate Service

THE New York commission ordered a water company furnishing service at a summer resort to replace existing transmission pipes with larger pipes in order to improve conditions and render reasonably adequate service. Pressure was insufficient during the summer season.

Commissioner Brewster, speaking for the commission, said:

> The company undertook to supply water to the residents of this territory and having assumed the privileges of the business is required to meet the obligations to its consumers which go with it. The testimony very clearly indicates that the service now being rendered is inadequate.

Witnesses for the company questioned the ability of the company to obtain a necessary loan for property improvements, but the commission, after reviewing the corporate history, declared that 20 per cent of gross operating revenue had been applied to salary payments and 26½ per cent to dividends in the preceding year. It was said to be difficult to believe that this company "with a steady income and history of substantial dividends paid" would be unable to sell the necessary bond issue with which to carry out, in addition to the cash on hand, the required improvements. *Re Sylvan Spring Water Co. (Case No. 9988).*

Undepreciated Original Cost Not the Sole Basis for Fixing Rate Base

THE Pennsylvania commission, in recognition of judicial decisions, has found it necessary to depart from its position that undepreciated original cost is a proper rate base. The commission said that although the considerations which it had set forth in support of its use of undepreciated original cost might be persuasive from an economic or administrative standpoint, they were not considered sufficient to justify the use of such a rate base under the state and Federal Constitutions. The commission continued:

> As we read the decisions, final rates—as distinct from temporary rates—cannot be prescribed solely on the basis of undepreciated original cost. Original cost, reproduction cost, securities outstanding, and such other factors as may appear relevant under the circumstances of each case, must be considered. We must, therefore, sustain the exceptions of respondent, in so far as they suggest a reconsideration of our rate base determination, so that the determina-

tion may accord with the rules of law stated by the courts: Solar Electric Co. *v.* Public Utility Commission (1939) 137 Pa Super Ct 325.

This decision was upon a consideration of exceptions to findings in a sewer rate proceeding where the commission had found that the company had sustained the burden of reasonableness of its proposed rates. Findings were modified, but the ultimate rate result was not changed.

An estimate of cost of financing computed at 2 per cent of reproduction cost, rather than a 10 per cent determination by one witness, was accepted.

Evidence of accrued depreciation based upon observation and inspection methods was held insufficient to support the claim of the company. Interiors of sewers had been inspected by reflected sunlight, and the condition of manholes had been observed. Test holes had been dug at five locations to determine the condition of the pipe exterior and to examine the joints, and an examination had been made of the sewage treatment works to determine the work which would be necessary to place the entire plant in a condition as good as new.

This evidence was said to show nothing more than the cost of cleaning, flushing, straightening, and repairing various sewers, cost of replastering and rebuilding of several manholes in need of maintenance, cost of cleaning, painting, and repairing of interior and exterior surfaces at the treatment works, and similar expenditures. These items, said the commission, are nothing more than maintenance.

The commission determined both annual and accrued depreciation by the age-life method, using a 4 per cent sinking-fund (compound-interest) method. It was observed, however, that the commission's comments applied to the situation disclosed by the record and were not to be taken as the expression of a policy applicable under all circumstances.

Exceptions to an allowance of only 6 per cent for return were dismissed. It was pointed out that this rate of return had been accepted by the Pennsylvania Superior Court in the Cheltenham & Abington Sewerage Company Case. Proof submitted in support of going concern value was held to afford no basis for a definite allowance. *Kooker et al. v. Perkasie Sewer Co. (Complaint Docket Nos. 11308, 11316).*

Substitution of Motor Bus for Street Railway Service Required

A COMPLETE substitution of motor busses for street cars in the Nashville area is contemplated by a recent order of the Tennessee commission. Street railway facilities were found to be insufficient, inadequate, and improper. The type of service being rendered was said to be antiquated and obsolete, and wholly lacking in the essential comforts and esthetic attractiveness required by present-day standards.

The commission provided for an orderly substitution of motor bus lines in place of street car lines. It was ordered that a certificate of convenience and necessity be issued to the street railway company upon compliance with the laws and rules and regulations of the commission relative to filing of insurance, payment of inspection fee, and appointment of a process agent. The street railway company was required to file a statement of its intention to comply with and obey the order and decree, together with a statement setting forth a program or schedule for the orderly conversion of the street car system to a motor bus system. In the alternative the company was to file a statement to the effect that it elected not to proceed with a motor bus substitution but on the contrary elected to abandon service and proceed with the liquidation of its transportation facilities. In that event it would be required

to liquidate street car facilities as fast as substitute service could be made available by some other motor carrier company.

A motor bus company operating in the city and surrounding territory was also ordered to improve service by replacing motor busses with others of modern up-to-date type capable of rendering safe, adequate, and proper service.

A 5-cent fare was ordered on all lines. There was testimony indicating that an increase of more than 30 per cent in use of the transportation system could reasonably be expected when modern, proper, and up-to-date bus service was substituted for the present obsolete and inadequate service. The "ardent effort made by the several bidders for a bus franchise," all of whom had satisfied themselves of the excellent business prospects for a 5-cent fare operation, negatived, in the opinion of the commission, the street railway company's insistence that operation on a 5-cent fare would not be economically sound.

The city made demands with relation to the payment of claims and obligations for street repair and maintenance, removal of street railway tracks, and the continuance of a park tax upon the street railway company's gross revenue. Concerning these the commission said:

> Examination of the desires of the city stated herein-above discloses that several of those items wished by the city do not lie within the jurisdiction of the commission. Thus, the city's desire for the payment of certain claims and obligations for street repair and maintenance, together with the city's desire for the removal of all trackage laid within the city, together with the city's desire for continuation of a park tax upon the company's gross revenues, probably do not fall within the jurisdiction of the commission. Accordingly, the commission would approve any disposition which is made by agreement of the parties with reference to these matters, or in the absence of an agreement must needs leave the parties to their remedies at law.

However, the commission said it has sole and exclusive jurisdiction over the company's rates, the financial and capital structure, regulation in order to prevent harmful alliances with parent companies, and the establishment of a fair rate base. *Miller et al. v. Tennessee Electric Power Co. et al. (Docket No. 2380).*

Federal Power Commission Rules on Original Cost of Power Projects

THE Federal Power Commission, on rehearing, refused to modify its position in regard to items disallowed as part of a power project. Transfer of these items from the actual legitimate original cost of the project to appropriate surplus accounts had been ordered.

The commission held to be untenable a contention that the licensee had not been granted an opportunity to be heard on the question of accounting transfers. The commission pointed out that the issue presented in previous hearings was whether the items in question constituted actual legitimate original cost, and on this issue the licensee had a full hearing. The contention that actual legitimate original cost and original cost are different was rebutted by the commission:

> This contention is without merit. The only cost for licensed projects recognized by the act is that determined in accordance with the Interstate Commerce Commission, 1914 classification, in so far as applicable and except as limited by the act. There is nothing in the Interstate Commerce Commission classification which makes a distinction between "original cost" and "actual legitimate original cost"; the applicability of the rules and principles does not require or permit setting up a distinction in respect of the questions here involved; and there is nothing in the statutory limitations which would require or permit a distinction. Consequently "actual legitimate original cost" determinations are binding upon licensees for all accounting purposes, making "original cost" identical with "actual legitimate original cost."

The commission held that it has statutory authority to order a licensee to

transfer items from one account to another in accordance with the uniform system of accounts. Furthermore, it was stated that the order requiring the licensee's books to reflect its accounts properly is valid although it is not immediately necessary for some of the purposes that are prescribed in the Federal Power Act.

The commission conceded that its system of accounts prescribed for licensees may not preclude accounting regulation by the states, but it said that this does not mean that any state regulation may be imposed to the exclusion of the Federal Commission's regulation. *Re Northern States Power Co. (Opinion No. 21-B, Project No. 108).*

Other Important Rulings

THE Federal Circuit Court of Appeals held that the South Carolina eminent domain statute does not violate the due process clause of the Federal Constitution or permit private property to be taken for public use without just compensation, although it permits the condemnor to enter upon and use the land upon payment or deposit of the amount awarded by the referee, in view of the owner's equitable lien on his property and his retention of legal title until payment of the amount set in the jury's verdict. *Oakland Club v. South Carolina Public Service Authority, 110 F(2d) 84.*

The supreme court of Illinois declared that the power of a state commission to regulate rates for intrastate commerce is the same as that of the Interstate Commerce Commission to fix rates for interstate commerce, and neither commission is subject to interference by the other except that the latter commission may remove discrimination against interstate commerce, and to that end may control intrastate rates. *Rockwell Lime Co. v. Illinois Commerce Commission et al. 26 NE(2d) 99.*

The supreme court of Georgia sustained a petition in a suit by a citizen and taxpayer against the city of Atlanta to compel city officials to collect for water which they were furnishing free of charge to a fair association. The court held that one council could not by ordinance or contract bind itself or its successors so as to prevent free legislation in matters of municipal government; that the power to fix and regulate water rates is a legislative or governmental power; and that where a municipality leases property for a term of years, a contract provision obligating the city to supply free water service is *ultra vires* and void. *Screws v. City of Atlanta et al. 8 SE(2d) 16.*

The supreme court of Washington has held that the commission did not act arbitrarily or on a fundamentally wrong basis in fixing rates for ferry service by regarding the ferry system, which included many routes, as an integrated system rather than by fixing the rates on the basis of the experience of each individual route. *State ex rel. Kitsap County Transportation Co. et al. v. King County et al. 101 P(2d) 327.*

The supreme court of Washington has held that logging contractors engaged for hire in a combination of services for another, including the transportation of the latter's logs over the public highways, constitute contract carriers within the purview of the 1937 statutes providing that a portion of a combination of services in which a person is engaged for compensation includes transportation of property of another upon the public highways, is a business upon the public highways, and, therefore, is subject to regulation. *Elkins et al. v. Schaaf et al.*

NOTE.—The cases above referred to, where decided by courts or regulatory commissions, will be published in full or abstracted in *Public Utilities Reports.*

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VOLUME 33 PUR (NS) NUMBER 3

Points of Special Interest

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TITLES

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Garkane Power Company, Incorporated

v.

Public Service Commission

[No. 6186.]

(— Utah —, 100 P(2d) 571.)

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1. An organization not engaged in public service, whose business or operation is not open to an indefinite public, but holding itself out to serve only a certain restricted group of people, is not subject to the jurisdiction or regulation of the Commission as a public utility, p. 131.

Public utilities, § 43 — Status of membership organization — Solicitation of members.

2. The fact that a coöperative corporation furnishing service only to its members solicits membership and accepts all who pay their fee and agree to pay the monthly minimum charge does not affect the relationship of the corporation with its members, nor does it change the character of the service to be rendered, in the absence of evidence that the corporation is organized to, or intends to, evade the law, p. 132.

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[March 23, 1940.]

CERTIORARI *to review determination of Commission that it had jurisdiction over nonprofit electric coöperative serving only its members; Commission directed to vacate order.*

APPEARANCES: Vincent D. Nicholson, of Washington, D. C., and W. W. Porter, of Panguitch, for plaintiff; Joseph Chez, Attorney General, and John D. Rice, Assistant Attorney General, for defendant.

WOLFE, J.: This case is before us on a writ of certiorari. The question to be resolved is whether or not the defendant, Public Service Commission, has jurisdiction over the plaintiff, Garkane Power Company, Inc. This depends on whether Garkane is a "public utility" as that term is used in our statute, § 76–2–1 (28), Rev. Stats. of Utah, 1933.

Garkane Power Company, Inc., is a nonprofit membership corporation, organized pursuant to Chap. 6 of Title 18, Rev. Stats. of Utah, 1933, for the purpose of generating and transmitting to its members, electric energy. Certain facilities for carrying out this purpose have been erected. Franchises have been granted to Garkane by the towns it proposes to serve and it has obtained right of ways for its power lines from the towns and counties in which it will operate, and from various private individuals. On June 1, 1939, Garkane filed with the Public Service Commission an application for exemption from obtaining a certificate and, in the alternative, for a certificate of convenience and necessity. Hearings were held on said application and a report and order were entered by the Commission on August 10, 1939, 30 PUR(NS) 185, in which the Commission assumed jurisdiction over Garkane and granted the certificate. Garkane applied for a rehearing but it was denied, September 6, 1939; consequently the case was brought before this court on the question of jurisdiction.

There is little or no dispute as to the facts in this case; the parties disagree as to the significance of those facts and as to the interpretation of certain controlling statutes.

Section 3, Chap. 63, Laws of Utah 1935, provides that the Public Service Commission shall succeed to all powers, duties, and functions of the Public Utilities Commission, Title 76, Rev. Stats. of Utah, 1933. Section 76–4–1, Rev. Stats. of Utah, 1933 vests in the Public Utilities Commission "power and jurisdiction to supervise and regulate every *public utility* in this state." (Italics added.)

"The term 'public utility" includes

every common carrier, gas corporation, *electric corporation,* telephone corporation, telegraph corporation, water corporation, heat corporation, and warehouseman *where the service is performed for, or the commodity delivered to, the public generally.*" (Italics added.) Section 76–2–1 (28), Rev. Stats. of Utah, 1933.

An "electrical corporation is a person, group of persons, or a corporation which owns, controls, operates, or manages an electric plant or in anywise furnishes electric power *"for public service* within this state." Section 76–2–1 (20), Rev. Stats. of Utah, 1933.

[1] It is clear and undisputed that Garkane will "own, control, operate, and manage an electric plant." Assuming that the phrases "public service" and "for service to the public generally," have the same meaning the sole question is whether Garkane will furnish electric power "for public service," or "to the public generally."

The record shows that Garkane was incorporated for the purpose of generating or acquiring electric energy to distribute and sell to its *members only.* The corporation is nonprofit, and any excess money collected is to be returned or credited to the member consumers pro rata on the basis of the amount of electrical energy consumed during the period in which the excess was collected. The corporation is specifically prohibited from rendering service for or to the public. Membership in Garkane is restricted to persons, firms, corporations, or bodies politic who (1) pay membership fee ($5); (2) agree to purchase the minimum amount of electricity monthly which is set by the corporation; and (3) agree to comply with articles of incorporation, by-laws, and rules and regulations of the board of directors, *provided* he or it be accepted for membership by vote of the board or of the members.

In State ex rel. Public Utilities Commission v. Nelson (1925) 65 Utah 457, PUR1926A 89, 92, 93, 238 Pac 237, 239, 42 ALR 849, the question of the jurisdiction of the Public Utilities Commission over the activities of a person who, under contract, transported guests to and from a summer resort, was presented to this court. In holding that such transportation service did not constitute Nelson a common carrier, this court said: ". . . public service [is] serving and carrying all persons indifferently who apply for passage or for shipment of goods or freight. . . . Public service, as distinguished from mere private service, is thus a necessary factor to constitute a common carrier. . . . So, if the business or concern is not public service, where the public has not a legal right to the use of it, where the business or operation is not open to an indefinite public, it is not subject to the jurisdiction or regulation of the Commission. Humbird Lumber Co. v. Public Utilities Commission, 39 Idaho 505, PUR1925A 225, 228 Pac 271; Story v. Richardson (1921) 186 Cal 162, 198 Pac 1057, 18 ALR 750." And we pointed out that Nelson hauled only a certain restricted group of people (guests of the resort) and did not hold himself out as willing to haul anyone who applied.

The distinction there made is valid, and is conclusive of this case. Garkane does not propose to hold itself

out to serve all who apply and live near its lines; its very charter which gives it existence restricts its service to a certain group (members). It does not propose to serve "the public generally," but only to serve its members.

"The test . . . is . . . whether the public has a legal right to the use which cannot be gainsaid, or denied, or withdrawn, at the pleasure of the owner." Farmers' Market Co. v. Philadelphia & R. T. R. Co. (1891) 142 Pa 580, 586, 21 Atl 902, 989, 990.

"The essential feature of a public use is that it is not confined to privileged individuals, but is open to the indefinite public. It is this indefiniteness or unrestricted quality that gives it its public character." Thayer v. California Develop. Co. (1912) 164 Cal 117, 127, 128 Pac 21, 25.

[2] But the Public Service Commission points out that membership in Garkane is easy to obtain and that actually the corporation solicits membership and has apparently accepted thus far all who paid their fee and agreed to pay the monthly minimum. This does not affect the relationship of the corporation with its members nor does it change the character of the service to be rendered. The distinction between a public service corporation and a coöperative is a qualitative one. In a coöperative the principle of mutuality of ownership among all users is substituted for the conflicting interests that dominate the owner vendor—nonowner vendee relationship. In a coöperative all sell to each. The owner is both seller and buyer. So long as a coöperative serves only its owner-members and so long as it has the right to select those who become members, ordinarily it matters not that 5 or 1,000 people are members or that a few or all the people in a given area are accorded membership, provided the arrangement is a bona fide coöperative or private service organization and is not a device prepared and operated to evade or cicumvent the law. The courts will always scrutinize closely to determine whether or not a certain organization or method of conduct has for its purpose evasion of the law, and where it finds such evasion will declare such organization to be what it truly is. Davis v. People ex rel. Public Utilities Commission, 79 Colo 642, PUR1926E 635, 247 Pac 801. But in this case we find no evidence or likelihood that Garkane was organized to, or intends to, evade the law. It was organized by a group of consumers who had for years desired suitable electric energy in their homes, to procure and transmit to themselves such service. Garkane proposes to render service only in areas which heretofore have had no, or very inadequate, electrical service.

In its argument the Commission contends that as a matter of policy it would be bad to allow coöperatives such as Garkane to escape supervision and regulation on the theory, largely that they must be protected from themselves or the members be protected from mismanagement. On the contrary, it appears that there is no need for regulation of true coöperatives. The theory of public utility regulation is based on a recognition that most public utilities are monopolistic, that their services are necessary or convenient to the residents of the area, and that because of the conflict of interest between the utility and its customers

or consumers there is likely to arise situations where rates are so high as to deny service to many, or so low as to deny a fair return on its investment to the utility and its stockholders which in turn would tend to result in inadequate service. Therefore, regulation is desirable to harmonize and balance these interests. The services of Garkane may tend to be monopolistic in the area served because there is no other adequate utility to serve the residents there and its services will be convenient and useful if not vital to those residents, but the third element is totally lacking. There is no conflict of consumer and producer interest—they are one and the same. If rates are too high the surplus collected is returned to the consumers pro rata. If rates are too low the consumers must accept curtailed service or provide financial contribution to the corporation. If service is not satisfactory, the consumer-members have it in their power to elect other directors and demand certain changes. Resort to equity, as in the case of all mutuals may be had if one group of members seeks to overreach the others. The function of the Commission in approving rates, capital structure, etc., is unneeded by Garkane, its members, or the communities which it will serve.

[3] To the argument that Garkane may at some future time become an investment busines venture and sell power to nonmembers the answer is: when such change occurs it will be time enough for the Commission to take jurisdiction and to regulate its activities. Under Garkane's articles, only consumers may be members and each consumer unit is limited to one membership. The many cases cited by counsel to the effect that what a corporation actually does, and not what its articles say it can do, determines its status as a public utility, are accepted, but no showing has been made that Garkane is operating, or will operate, in violation of its articles. So long as Garkane operates in accordance with its articles of incorporation and bylaws there appears to be no basis for jurisdiction over it by the Public Service Commission.

[4] Nor do the other reasons assigned by counsel appear to establish that the Commission should have jurisdiction over Garkane. It is conceded that "the public" does not mean all of the people in the state or in any county or town. "The public" is a term used to designate individuals in general without restriction or selection. A service organization which holds itself out to serve all who wish to avail themselves of its services might be a public utility even though only one or two people actually receive service. On the other hand, as was held in Dairymen's Coöperative Sales Asso. v. Public Service Commission (1935) 318 Pa 381, 177 Atl 770, 98 ALR 218, the hauling of milk for some 17,000 members of the association was not an undertaking to haul for all persons indiscriminately, i. e., for the public. As said before, mere number is no criterion.

[5] Counsel's contention that the activities of Garkane will be affected with the public interest cannot be denied. But that which may be affected with a public interest is not necessarily a public utility. Nebbia v. New York (1934) 291 US 502, 78 L ed 940, 2 PUR(NS) 337, 54 S Ct 505, 89 ALR 1469. What does not appear is that

Garkane is a public utility and, as such, is subject to Commission regulation.

[6, 7] That it runs its lines along public roads under permission of the county or town is no indication that Garkane is a public utility any more than the permissive building on the public right of way of a platform for the collection of milk indicates that a dairy farmer is a public utility. And if we accept the test that the loan of public funds to a coöperative means that it must serve the public generally and is therefore a public utility, we must also class as public utilities, bound to serve the public, all of the many hundreds or thousands of business organizations which have borrowed from the Federal government through R.F.C., P.C.C., etc.

The Public Service Commission of West Virginia, a body of equal dignity with our Utah Public Service Commission, in considering an application for exemption from its jurisdiction, held, in Re Harrison Rural Electrification Asso. (1938) 24 PUR(NS) 7, 15, that a coöperative power association in all essential respect like Garkane was "a public utility within the purview of the state's statute." In this case counsel for the Commission has adopted much of the reasoning of the West Virginia Commission, that the business is "affected with a public interest," that since a loan of public funds has been secured by the coöperative it must serve all persons desiring service, that membership is easy to secure, that lines will run along and cross public roads, etc. But the holding of another state Commission is no more, nor even as fully, convincing as the holding of our own Commission. The action of the West Virginia Commission appears, moreover, to be contrary to the prevailing practice of most state Commissions, and we believe that there is a ready answer to each of the reasons assigned for its holding, some of which we have heretofore answered. Others are answered by the reasoning in Inland Empire Rural Electrification v. Department of Public Service (1939) 199 Wash 527, 30 PUR(NS) 173, 92 P(2d) 258, in which the Washington supreme court held that a rural electric service coöperative was not a public utility under Washington's laws. We believe the reasoning in the Inland Empire Case to be convincing and sound.

[8] We hold, therefore, that a nonprofit electric coöperative which serves only its members, and is completely consumer owned with each consumer limited to one membership, is not a public utility within the purview of our statute.

Defendant, Public Service Commission, is directed to vacate its order of August 10, 1939, in which it assumed jurisdiction over plaintiff, Garkane Power Company, Inc.

Costs to plaintiff.

Moffat, C. J., and Larson, McDonough, and Pratt, JJ., concur.

UNITED STATES SUPREME COURT

Federal Communications Commission

v.

Sanders Brothers Radio Station

[No. 499.]

(309 US —, 84 L ed —, 60 S Ct 693.)

Monopoly and competition, § 81.1 — Radio license — Economic injury.

1. Economic injury to an existing radio station is not a separate and independent element to be considered by the Federal Communications Commission in passing on an application for a broadcasting license, p. 137.

Appeal and review, § 80 — Parties — Radio licensee.

2. The licensee of an existing radio station may appeal from an order of the Federal Communications Commission granting a license to a rival station, p. 139.

Appeal and review, § 53 — Duty to affirm — Questions of veracity.

3. The Supreme Court will not upset the finding of the lower court as to the veracity of the disavowal by the Federal Communications Commission that it used as evidence in the hearing of an application for a radio station license certain data and reports in its files without permitting an intervener to inspect them, p. 139.

[March 25, 1940.]

WRIT OF CERTIORARI *to United States Court of Appeals for the District of Columbia to review a judgment setting aside action of Federal Communications Commission in granting radio station license; reversed. For case below, see 70 App DC 297, 106 F(2d) 321.*

APPEARANCES: Robert H. Jackson, Attorney General, and William J. Dempsey, of Washington, D. C., argued the cause for petitioner; Louis G. Caldwell, of Washington, D. C., argued the cause for respondent.

Mr. Justice ROBERTS delivered the opinion of the court:

We took this case to resolve important issues of substance and procedure arising under the Communications Act of 1934, as amended.[1]

January 20, 1936, the Telegraph Herald, a newspaper published in Dubuque, Iowa, filed with the petitioner an application for a construction permit to erect a broadcasting station in that city. May 14, 1936, the re-

[1] Act of June 19, 1934, Chap. 652, 48 Stat. at L. 1064; Act of June 5, 1936, Chap. 511, 49 Stat. at L. 1475; Act of May 20, 1937, Chap. 229, 50 Stat. at L. 189, 47 USCA, §§ 151 et seq.

spondent, who had for some years held a broadcasting license for, and had operated, Station WKBB at East Dubuque, Illinois, directly across the Mississippi river from Dubuque, Iowa, applied for a permit to move its transmitter and studios to the last-named city and to install its station there. August 18, 1936, respondent asked leave to intervene in the Telegraph Herald proceeding, alleging in its petition, inter alia, that there was an insufficiency of advertising revenue to support an additional station in Dubuque and insufficient talent to furnish programs for an additional station; that adequate service was being rendered to the community by Station WKBB and there was no need for any additional radio outlet in Dubuque and that the granting of the Telegraph Herald application would not serve the public interest, convenience, and necessity. Intervention was permitted and both applications were set for consolidated hearing.

The respondent and the Telegraph Herald offered evidence in support of their respective applications. The respondent's proof showed that its station had operated at a loss; that the area proposed to be served by the Telegraph Herald was substantially the same as that served by the respondent and that, of the advertisers relied on to support the Telegraph Herald station, more than half had used the respondent's station for advertising.

An examiner reported that the application of the Telegraph Herald should be denied and that of the respondent granted. On exceptions of the Telegraph Herald, and after oral argument, the broadcasting division of petitioner made an order granting both applications, reciting that "public interest, convenience, and necessity would be served" by such action. The division promulgated a statement of the facts and of the grounds of decision, reciting that both applicants were legally, technically, and financially qualified to undertake the proposed construction and operation; that there was need in Dubuque and the surrounding territory for the services of both stations, and that no question of electrical interference between the two stations was involved. A rehearing was denied and respondent appealed to the court of appeals for the District of Columbia. That court entertained the appeal and held that one of the issues which the Commission should have tried was that of alleged economic injury to the respondent's station by the establishment of an additional station and that the Commission had erred in failing to make findings on that issue. It decided that, in the absence of such findings, the Commission's action in granting the Telegraph Herald permit must be set aside as arbitrary and capricious.[2]

The petitioner's contentions are that under the Communications Act economic injury to a competitor is not a ground for refusing a broadcasting license and that, since this is so, the respondent was not a person aggrieved, or whose interests were adversely affected, by the Commission's action, within the meaning of § 402(b) of the Act, 47 USCA, § 402(b), which authorizes appeals from the Commission's orders.

The respondent asserts that the peti-

[2] Sanders Bros. Radio Station v. Federal Communications Commission (1939) 70 App DC 297, 106 F(2d) 321.

tioner in argument below contented itself with the contention that the respondent had failed to produce evidence requiring a finding of probable economic injury to it. It is consequently insisted that the petitioner is not in a position here to defend its failure to make such findings on the ground that it is not required by the act to consider any such issue. By its petition for rehearing in the court below, the Commission made clear its position as now advanced. The decision of the court below, and the challenge made in petition for rehearing and here by the Commission, raise a fundamental question as to the function and powers of the Commission and we think that, on the record, it is open here.

[1] *First.* We hold that resulting economic injury to a rival station is not in and of itself, and apart from considerations of public convenience, interest, or necessity, an element the petitioner must weigh and as to which it must make findings in passing on an application for a broadcasting license.

Section 307(a) of the Communications Act, 47 USCA, § 307(a), directs that "the Commission, if public convenience, interest, or necessity will be served thereby, subject to the limitations of this act, shall grant to any applicant therefor a station license provided for by this act." This mandate is given meaning and contour by the other provisions of the statute and the subject matter with which it deals.[3] The act contains no express command that in passing upon an application the Commission must consider the effect of competition with an existing station. Whether the Commission should consider the subject must depend upon the purpose of the act and the specific provisions intended to effectuate that purpose.

The genesis of the Communications Act and the necessity for the adoption of some such regulatory measure is a matter of history. The number of available radio frequencies is limited. The attempt by a broadcaster to use a given frequency in disregard of its prior use by others, thus creating confusion and interference, deprives the public of the full benefit of radio audition. Unless Congress had exercised its power over interstate commerce to bring about allocation of available frequencies and to regulate the employment of transmission equipment the result would have been an impairment of the effective use of these facilities by anyone. The fundamental purpose of Congress in respect of broadcasting was the allocation and regulation of the use of radio frequencies by prohibiting such use except under license.

In contradistinction to communication by telephone and telegraph, which the Communications Act recognizes as a common carrier activity and regulates accordingly in analogy, to the regulation of rail and other carriers by the Interstate Commerce Commission,[4] the act recognizes that broadcasters are not common carriers and are not to be dealt with as such.[5] Thus the act recognizes that the field of broadcasting is one of free competition. The sections dealing with broad-

[3] Federal Radio Commission v. Nelson Bros. Bond & Mortg. Co. 289 US 266, 285, 77 L ed 1166, 1178, PUR1933D 465, 53 S Ct 627, 89 ALR 406.

[4] See Title II, §§ 201–221, 47 USCA, §§ 201–221.

[5] See § 3(h), 47 USCA, § 153(h).

casting demonstrate that Congress has not, in its regulatory scheme, abandoned the principle of free competition, as it has done in the case of railroads,[6] in respect of which regulation involves the suppression of wasteful practices due to competition, the regulation of rates and charges, and other measures which are unnecessary if free competition is to be permitted.

An important element of public interest and convenience affecting the issue of a license is the ability of the licensee to render the best practicable service to the community reached by his broadcasts. That such ability may be assured the act contemplates inquiry by the Commission, inter alia, into an applicant's financial qualifications to operate the proposed station.[7]

But the act does not essay to regulate the business of the licensee. The Commission is given no supervisory control of the programs, of business management or of policy. In short, the broadcasting field is open to anyone, provided there be an available frequency over which he can broadcast without interference to others, if he shows his competency, the adequacy of his equipment, and financial ability to make good use of the assigned channel.

The policy of the act is clear that no person is to have anything in the nature of a property right as a result of the granting of a license. Licenses are limited to a maximum of three years' duration, may be revoked, and need not be renewed. Thus the channels presently occupied remain free for a new assignment to another licensee in the interest of the listening public.

Plainly it is not the purpose of the act to protect a licensee against competition but to protect the public. Congress intended to leave competition in the business of broadcasting where it found it, to permit a licensee who was not interfering electrically with other broadcasters to survive or succumb according to his ability to make his programs attractive to the public.

This is not to say that the question of competition between a proposed station and one operating under an existing license is to be entirely disregarded by the Commission, and, indeed, the Commission's practice shows that it does not disregard that question. It may have a vital and important bearing upon the ability of the applicant adequately to serve his public; it may indicate that both stations—the existing and the proposed—will go under, with the result that a portion of the listening public will be left without adequate service; it may indicate that, by a division of the field, both stations will be compelled to render inadequate service. These matters, however, are distinct from the consideration that, if a license be granted, competition between the licensee and any other existing station may cause economic loss to the latter. If such economic loss were a valid reason for refusing a license this would mean that the Commission's function is to grant a monopoly in the field of broadcasting, a result which the act itself expressly negatives,[8] which Congress would not

[6] Compare Texas & P. R. Co. v. Gulf, C. & S. F. R. Co. (1926) 270 US 266, 277, 70 L ed 578, 583, 46 S Ct 263; Chicago Junction Case (Baltimore & O. R. Co. v. United States) (1924) 264 US 258, 68 L ed 667, 44 S Ct 317.

[7] See § 308(b), 47 USCA, § 308(b).

[8] See § 311, 47 USCA, § 311, relating to unfair competition and monopoly.

have contemplated without granting the Commission powers of control over the rates, programs, and other activities of the business of broadcasting.

We conclude that economic injury to an existing station is not a separate and independent element to be taken into consideration by the Commission in determining whether it shall grant or withhold a license.

[2] Second. It does not follow that, because the licensee of a station cannot resist the grant of a license to another, on the ground that the resulting competition may work economic injury to him, he has no standing to appeal from an order of the Commission granting the application.

Section 402(b) of the act, 47 USCA, § 402(b), provides for an appeal to the court of appeals of the District of Columbia (1) by an applicant for a license or permit, or (2) "by any other person aggrieved or whose interests are adversely affected by any decision of the Commission granting or refusing any such application."

The petitioner insists that as economic injury to the respondent was not a proper issue before the Commission it is impossible that § 402(b) was intended to give the respondent standing to appeal, since absence of right implies absence of remedy. This view would deprive subsection (2) of any substantial effect.

Congress had some purpose in enacting § 402(b) (2). It may have been of opinion that one likely to be injured by the issue of a license would be the only person having a sufficient interest to bring to the attention of the appellate court errors of law in the action of the Commission in granting the license. In this view, while the injury to such person would not be the subject of redress, that person might be the instrument, upon an appeal, of redressing an injury to the public service which would otherwise remain without remedy. It is within the power of Congress to confer such standing to prosecute an appeal.[9]

We hold, therefore, that the respondent had the requisite standing to appeal and to raise, in the court below, any relevant question of law in respect of the order of the Commission.

Third. Examination of the findings and grounds of decision set forth by the Commission discloses that the findings were sufficient to comply with the requirements of the act in respect of the public interest, convenience, or necessity involved in the issue of the permit. In any event, if the findings were not as detailed upon this subject as might be desirable, the attack upon them is not that the public interest is not sufficiently protected but only that the financial interests of the respondent have not been considered. We find no reason for abrogating the Commission's order for lack of adequate findings.

[3] *Fourth.* The respondent here renews a contention made in the court of appeals to the effect that the Commission used as evidence certain data and reports in its files without permitting the respondent, as intervener before the Commission, the opportunity of inspecting them. The Commis-

[9] Compare Interstate Commerce Commission v. Oregon-Washington R. & Nav. Co. (1933) 288 US 14, 23–25, 77 L ed 588, 594–596, 53 S Ct 266.

sion disavows the use of such material as evidence in the cause and the court of appeals has found the disavowal veracious and sufficient. We are not disposed to disturb its conclusion.

The judgment of the court of appeals is reversed.

Mr. Justice McReynolds took no part in the decision of this case.

WISCONSIN PUBLIC SERVICE COMMISSION

Re Illinois Central Railroad Company

[2-R-1054.]

Service, § 267 — Discontinuance — Stations — Revenue and use.

The revenue derived at a railroad station is merely evidentiary of the use being made of the service and is not controlling as to whether service should be continued.

[December 22, 1939.]

APPLICATION *for authority to discontinue agency railroad station and to operate as a prepaid nonagency station; denied.*

APPEARANCES: Illinois Central Railroad Company, by Schubring, Ryan, Petersen & Sutherland, by A. R. Petersen; W. J. Garrity, Special Assistant to the Vice President and General Manager; F. W. Dougan, Trainmaster.

Order of Railroad Telegraphers, by M. T. Fullington, Vice President, Springfield, Missouri.

H. S. Ammann, Clarno, in his own behalf and other citizens of Clarno.

Of the Commission staff, L. P. Atwood, Engineering Department.

By the COMMISSION: Clarno is located 7.3 rail miles south of Monroe and 3.5 rail miles north of Orangeville, Illinois. It has a population of fifty and is now served by the applicant company by trains northbound at 1:30 P. M. and southbound at 5 P. M., daily except Sunday. The mail is handled by a star route.

The testimony indicates that if the agent at Clarno is discontinued, the billing and other office matters will be handled out of Orangeville which is 5.4 highway miles south.

Exhibit 4 shows that the total gross revenue for the years 1935 to 1938, inclusive, averaged more than $14,500 a year and that the gross revenue for the first nine months of 1939 was in excess of $8,700. The average annual wage of the agent between 1935 and 1938 was about $1,300 and for the first nine months of 1939 amounted to approximately $1,000.

The railroad contends that shippers and receivers of freight could be satisfactorily served from Orangeville or

Monroe, at which points full-time agents would be maintained.

Several residents of this area appeared in opposition to the application and testified that for many years they have insisted that their traffic be moved by the Illinois Central Railroad so as to give this carrier all the support possible.

The owner of a general store stated that grocery houses at Chicago have desired to ship by truck but that he has insisted upon rail delivery. He testified that he has no carload shipments but that in 1939 he had 64 l.c.l. shipments in addition to express.

A livestock dealer said that the Illinois Central Railroad contacted him early in the spring and asked him to solicit livestock for rail shipment. He stated that he has shipped 55 cars in seven months and that through the agent he is able to obtain the cars a week in advance. He said that some farmers have shipped livestock with him merely because he employed rail facilities and that while he could probably obtain service through the Orangeville station, the Clarno agent has taken considerable responsibility in aiding him.

A farm implement dealer at Clarno stated that he always specifies that his shipments be made by this railroad and that he has done this principally to assist in keeping the station open.

A large receiver of lumber, feed, fuel, and builders' hardware said that with the exception of one or two items all of his traffic is moved via this carrier. He said that from January 1st to the date of the hearing he had paid transportation charges of approximately $7,500 on carload shipments, more than $750 on prepaid cars, and that his l.c.l. shipments collected at Clarno amounted to approximately $400. In addition he stated that he has some prepaid l.c.l. shipments of which he had no record but thought they would amount to about $200. He said that during October, which is not included in Exhibit 4, he paid approximately $2,200 to the station at Clarno. He stated that he would be seriously inconvenienced, particularly on shipments of shippers' orders, if the bills had to go through the bank at Monroe and delay the car at Orangeville. This witness stated that the removal of the agent at Clarno would eliminate approximately $2,000 per year revenue which he is now paying to this carrier. He was particularly concerned with the fact that any merchandise unloaded at the depot would be at the owner's risk. He said that on grass seed priced at $60 or $70 a bag this risk would place an undue responsibility on the consignee, and also contended that the present depot facilities were inadequate for this purpose. He said that the 5 P. M. train was often late and that unless he happened to notice that the train crew was unloading merchandise for him he would not know it was there until the second morning as it would take that long to receive mail notice from Orangeville. This witness also stated that during the past twenty-three years he has paid approximately a quarter of a million dollars in freight charges to the Illinois Central Railroad Company.

We have often pointed out that the revenue derived at a station is merely evidentiary of the use being made of the service and that it is by no means controlling as to the question of

whether an agent should be retained. The revenue obtained at this station would lead us to believe that considerable use is being made of the service of the railroad and from the record it is quite clear that the agent's services are necessary if this revenue is to be wholly continued. The testimony of one witness indicates that he would be required to divert enough traffic from this railroad to more than pay the agent's salary which for all practical purposes is the only saving that would be effected by the grant of the proposal herein. The record is likewise clear that the shippers would suffer considerable inconveniences in obtaining their freight if the agent were removed.

Finding

The Commission finds:

That adequate public service requires the maintenance of agency service by the Illinois Central Railroad Company at its station at Clarno, Green county.

ORDER

It is therefore *ordered:*

That the application of the Illinois Central Railroad Company for authority to discontinue agency service at its station at Clarno, Green county, be and is hereby denied.

SECURITIES AND EXCHANGE COMMISSION

Re Eastern Shore Public Service Company et al.

[File No. 43-277, Release No. 1917.]

Security issues, § 1 — Definition — "Note" treated as bond.

1. An instrument designated a "note" comes within the meaning of the term "bond" as used in § 7(c) of the Holding Company Act, 15 USCA, § 79g, where the note is subject to a loan agreement containing covenants on the part of the issuing company and securities are to be pledged consisting of bonds which are in turn secured by a first lien on the physical property of the issuing company and by a first lien on bonds of subsidiaries, constituting a lien on the physical properties of such subsidiaries, p. 148.

Security issues, § 44 — Approval — Type of security pledged.

2. A note (treated as a bond under the Holding Company Act) was held to be so secured by other assets as to satisfy the requirements of § 7(c)(1)(B) of the Holding Company Act, where the note was to be held by a single investor well qualified to judge the merits of the risks assumed, where the loan agreement contained no provision for breaking up the note for sale to the public, and where the security to be pledged consisted of bonds of the issuing company secured by a first lien on its physical property and by

a first lien on bonds of subsidiaries which constituted a lien on the physical properties of such subsidiaries, p. 148.

[February 2, 1940.]

DECLARATION *by subsidiary of registered holding company pursuant to § 7 of the Holding Company Act concerning the issuance and sale of a secured note, and applications by subsidiaries for exemption of certain securities under § 6; granted subject to conditions.*

APPEARANCES: Robert N. Hislop of the Public Utilities Division of the Commission; Travis, Brownback & Paxson, by Bradford Magill, for Eastern Shore Public Service Company (Del.) et al.; F. W. C. Webb, for Eastern Shore Public Service Company (Del.) et al.

By the COMMISSION: Eastern Shore Public Service Company,[1] a Delaware Corporation (hereinafter referred to as Delaware) a direct subsidiary of Eastern Power Company, a registered holding company, has filed a declaration pursuant to § 7 of the Public Utility Holding Company Act of 1935, 15 USCA, § 79g concerning the issuance and sale of its 2-year 3 per cent secured note in the face amount of $1,000,000 to the Chase National Bank at par and the issuance and pledge as security therefor of first mortgage and first lien bonds 5 per cent series C due 1946 in the principal amount of $1,100,000. It is represented that the proceeds from the note are to be used to finance the construction at Vienna, Maryland, of additional generating facilities for Delmarva Power Company, a wholly owned subsidiary of declarant.

Declarant states that it originally intended to provide these funds from a contemplated refunding program, however, the urgent need for additional electric energy made it impossible to delay until the details of such program had been completely worked out. It is impossible to raise the needed funds except through borrowing from sources outside the Associated system. It is further represented that this present declaration is merely to obtain funds through temporary financing which will be placed on a permanent basis when the refunding program for declarant, which is now being carried forward with all possible dispatch, has been executed.

Delmarva Power Company (hereinafter referred to as Delmarva), a Maryland corporation, Eastern Shore Public Service Company of Maryland

[1] Eastern Shore Public Service Company (Del.) is a majority-owned subsidiary of Eastern Power Company (Eastern Power Company owning two-thirds of the common stock of Eastern Shore Public Service Company, the remianing one-third of the common stock being owned by Virginia Public Service Company, a wholly owned subsidiary of Eastern Power Company) which is in turn a wholly owned subsidiary of Southeastern Electric and Gas Company which is in turn a wholly owned subsidiary of General Gas and Electric Company which is in turn a wholly owned subsidiary of Associated Gas and Electric Corporation which is in turn a wholly owned subsidiary of Associated Gas and Electric Company which is in turn a wholly owned subsidiary of voting trustees under a voting trust agreement dated March 27, 1933, the six last-named organizations being registered holding companies.

(hereinafter referred to as Maryland), a Maryland corporation, and Eastern Public Shore Service Company of Virginia (hereinafter referred to as Virginia), a Virginia corporation, have each filed applications pursuant to § 6(b) of the act, 15 USCA, § 79f seeking exemption from the provisions of § 6(a) of the act of the issue and sale of certain securities to be more fully described hereinafter. All of these applicants are wholly owned subsidiaries of Delaware.

In the case of Delmarva the proposed issue is to consist of its first mortgage 4 per cent bonds due 1969 in the principal amount of $1,750,000. It is represented that these bonds are to be sold to Delaware at par, and the net proceeds, estimated at $1,747,400 are to be used for the redemption at 100 of $1,150,000 first mortgage 5½ per cent bonds of Delmarva due 1949, now held by Delaware, and to use the balance of $597,400 toward the construction of the additional generating facilities.

In the case of Maryland the proposed issue is to consist of its first mortgage 4 per cent bonds due 1969 in the principal amount of $2,142,500 and 2,855 shares of $100 par common stock. It is represented that the bonds and stock are to be sold to Delaware at par, and the net proceeds, estimated at $2,424,700, are to be used for the redemption at 100 of $1,742,500 refunding mortgage 6 per cent bonds of Maryland due 1954, now held by Delaware, and to repay advances of $558,700 from Delaware and $123,500 from Delmarva.

In the case of Virginia the proposed issue is to consist of its first mortgage 4 per cent bonds due 1969 in the principal amount of $1,372,500. It is represented that these bonds are to be sold to Delaware at par and the net proceeds estimated at $1,370,300 are to be used for the redemption at 100 of $1,247,500 first mortgage 6 per cent bonds of Virginia due 1957, now held by Delaware, and the repayment of advances from Delaware in the amount of $109,390. The balance of $13,410 is to be used to reimburse Virginia's treasury for expenditures made by it for construction.

Delaware has filed an application pursuant to § 10(a) (1) of the act, 15 USCA, § 79j for approval of the acquisition by it of the securities above described.

It is represented that these transactions are proposed for two purposes:

1. To refund the bonds of Delmarva, Maryland, and Virginia at lower interest rates.[2]

2. To supply Delmarva with $1,000,000 with which it may construct the new generating facilities; it is proposed to accomplish this objective in the following manner:

From the sale of $600,000 principal amount 4 per cent bonds to Delaware		$600,000
From Maryland in payment of open account		123,500
From Delaware in payment of account payable to Delmarva	$12,926.11	
From Delaware as advances	263,573.89	
		276,500
Total		$1,000,000

After appropriate notice a consolidated hearing was held on the declaration and applications, as amended, at which no member of the public re-

[2] It is represented that this step is being taken, among other reasons, as a necessary preliminary to the contemplated refunding of Eastern Shore Public Service Company (Del.).

quested to be heard. Having considered the record in these matters the Commission now makes the following findings:

Nature of Declarant and Applicants

In addition to owning all of the common stock of applicants, Delaware owns all of their bonded indebtedness, there being no preferred stock issues on any of these subsidiaries.[3]

The applicants are all operating public utility companies, operating in their respective states of incorporation. Delmarva owns and operates a steam generating plant at Vienna, Maryland, which is the principal base load plant for Delaware, Maryland, and Virginia.[4]

The declarant is an operating public utility as well as a holding company, deriving approximately 56 per cent of its gross income from utility operations.

The territory served by these companies is located on a peninsula almost completely separated from the mainland, and is primarily an agricultural territory sparsely populated. The communities served for the most part are small and there are practically no industries such as one would find in areas with concentrated populations.

Need for the Proposed New Generating Facilities

Engineering reports introduced in the record and the uncontroverted testimony of witnesses at the hearing establish the fact that presently the dependable capacity of the companies embraced by the Eastern Shore system (Delaware and all of its subsidiaries [5]) is being used to the maximum for normal operations. During the past twelve months the peak loads have exceeded this maximum dependable capacity.[6]

Because of the peculiar geographic factors affecting Eastern Shore system (it being located on a peninsula which practically isolates it from the mainland [7]) the possibilities of interconnections are limited. In the north the distribution system of Eastern Shore system is separated by approximately 50 miles from that of Delaware Power and Light Company. An interconnection with this company would require the construction of transmission lines

[3] In addition to the three applicants, Delaware owns all of the common and preferred stock of Maryland Light and Power Company, a Maryland corporation. This latter company has outstanding $1,089,000 principal amount of bonds none of which are owned by Delaware (Associated system companies, however, own $119,000 principal amount of these bonds).

[4] While it appears that the applicants and declarants are parts of what should properly be operated as one corporation it is represented that local state laws, together with tax concessions made to Delmarva (which we are informed expire within the next two or three years), presently make any elimination of existing companies impossible.

[5] Excluding only the operations of Maryland Light and Power Company on the mainland of Maryland and the division of Virginia known as Exmore (consisting of two Diesel plants with a total dependable capacity of 1,789 kilowatts) which has no interconnection with the rest of Eastern Shore system.

[6] The maximum dependable capacity of the Eastern Shore system is 15,271 kilowatts. Since July, 1939, the demand has been exceeding this capacity at all times, reaching a high of 16,000 kilowatts during August, 1939.

[7] The only facilities of Delaware and all its subsidiaries not on the peninsula consist of a small generating plant at Leonardtown, Maryland, together with a transmission line running to Piscataway, Maryland. This represents only about one-sixth of the total operations of Maryland Light and Power Company.

to bridge this gap. In addition to the cost of this construction there would be the cost of power purchased which would, since the companies are not under common control, include some profit to the selling company. It is the judgment of the engineers who prepared the reports above referred to that such an interconnection would be uneconomical.

The only other possible outside source of power is from the Consolidated Gas, Electric Light & Power Company of Baltimore, which would require a submarine cable from 7 to 10 miles long under Chesapeake bay. This would also require the building of a considerable amount of transmission lines. Because of the expense of this possible solution, it has been given no consideration.

It would seem that the efficient operation of Eastern Shore system requires the proposed new generating facilities which are to provide 7,500 kilowatts of additional capacity. The proposal to provide for these additional facilities by extension of the plant at Vienna, Maryland, also seems to be justifiable.

The estimated cost of $1,069,000 for these new facilities seems high. The engineer who prepared this estimate testified that he purposely made the estimate higher than he felt the actual cost would be in order to include all unforeseen exigencies. While the estimated cost approximates $143 per kilowatt, a partial explanation for this arises from the fact that where feasible the new plant will also provide for future anticipated expansion. Among the provisions for this future expansion is the present construction of a new discharge canal for condensing water which will be large enough for future expansion. The present ash handling facilities are being moved and installed in a manner to provide for future additions. The foundation piling is being installed in anticipation of future needs.

Fixed Assets of Delaware and Subsidiaries

Consolidated fixed assets of Delaware and its subsidiaries were stated at $14,927,167 as at October 31, 1939. This item includes an amount of $565,035 which represents a consolidating adjustment to reflect excess cost to Delaware of its subsidiaries over the book value of such subsidiaries at the date of acquisition. Also included in consolidated fixed assets is an undetermined amount representing upward revaluations of fixed assets of Delaware and its subsidiaries made in a total amount of $538,425 from 1926 to 1931.

Declarant states that no determination is available showing the amount of such upward revaluations remaining in fixed assets as at October 31, 1939; however, undetermined amounts have been written out of the fixed assets accounts in connection with retirements of physical property.

The consolidated reserve for retirements was stated at $1,847,679.52 as at October 31, 1939, which amounted to 12.86 per cent of combined fixed assets.

Consolidated Earnings of Delaware and Subsidiaries

The following statement reflects the

consolidated earnings statement of Delaware:

EASTERN SHORE PUBLIC SERVICE CO. (Del.) (Consl.)
(12 Months Ended October 31, 1939)

	Present	Proposed
Gross Income	$925,458	$911,929
Deductions:		
Interest	$442,989	$457,989*
Other	48,080	34,508
Total Deductions	$491,069	$492,497
Avail. for Pfd. Dividends	$434,389	$419,432
Preferred Dividends	215,559	215,559
Avail. for Common Dividends	$218,830	$203,873

* Includes interest on 3% 2-year note on basis of that note being outstanding an average of 6 months. This method of computation was used since the money is to be taken down only as needed. Furthermore, no allowance has been given here to increased revenues or economies to be realized from the proposed new generating facilities.

	Present	Proposed
Times long-term debt interest earned	2.09	1.99
Times all charges earned	1.88	1.85
Times all charges and preferred dividends earned	1.31	1.29

The amount of $925,458 available for charges for the twelve months ended October 31, 1939, as shown in the above statement, was after the following charges to income for maintenance and depreciation:

	Amount	% of Consolidated Gross Revenue	% of Combined Property
Maintenance	$129,700	4.52	0.90
Depreciation	355,344	12.39	2.48
Total	$485,044	16.91	3.38

The depreciation policy reflected above represents a substantial improvement in recent years, and since 1934, more than half of the earnings available for common stock dividends have been retained for additions and betterments.

Effect of Proposed Transactions on Consolidated Capitalization of Delaware and Subsidiaries

The following tabulation reflects the effect of the proposed transactions on the consolidated capitalization of Delaware:

Security Structure as at October 31, 1939
EASTERN SHORE PUBLIC SERVICE CO. (Del.) (Consl.)

Security	Present Amount Outstanding	Present % of Total	Proposed Amount Outstanding	Proposed % of Total
Long-term debt	$8,139,000	60.35	$9,139,000*	63.08
Preferred Stock	3,253,173	24.12	3,253,173	22.46
Common Stock	1,092,000	8.09	1,092,000	7.54
Total Securities	$12,484,173	92.56	$13,484,173	93.08
Capital Surplus	562,144	4.17	562,144	3.88
Corporate Surplus	440,879	3.27	440,879	3.04
Total Securities and Surplus	$13,487,196	100.00	$14,487,196	100.00
Ratio of Long-term Debt to Net Fixed Assets		62.23		64.97

* Includes 2-year 3% note proposed to be issued.

Fees and Commissions

The total fees and commissions to be paid by declarant and applicants in connection with the above-outlined

transactions are estimated at $16,500.[8] While this appears high for the financing of $1,000,000 it must be remembered that in addition to the new money being raised, three of declarant's subsidiaries are refunding their bonds at lower interest rates. To do this new indentures are being prepared involving legal and printing expense. The evidence reveals that considerable time has been required in planning and executing the transactions.

Among its fees and commissions Delaware has included a "standby" commission of $5,000 which it proposes to pay the Chase National Bank. This commission is paid for Chase's agreement to hold the $1,000,000 until May 31, 1940, against which Delaware may draw as the money is needed, interest being paid only for the actual length of time the money has been employed by Delaware.

Under the special circumstances surrounding this declaration and these applications the fees and commissions to be paid in connection with these transactions do not appear excessive.

Compliance with the Act

[1, 2] Section 7(c) of the act provides, inter alia, that "the Commission shall not permit a declaration regarding the issue or sale of a security to become effective unless it finds that . . . (1) (B) (iii) such security is . . . a bond . . . secured by any other assets of the type and character which the Commission by rules and regulations or order may prescribe as appropriate in the public interest or for the protection of investors. . . ."

The note which Delaware now proposes to issue to the Chase National Bank in the face amount of $1,000,000 is subject to a loan agreement containing certain covenants on the part of the company. The security to be pledged with Chase consists of bonds of declarant which are in turn secured by a first lien on the physical property of declarant and by a first lien on bonds of subsidiaries of declarant constituting a lien on the physical properties of such subsidiary companies. In view of these facts we are of the opinion that this instrument, although designated a "note," comes within the meaning of the term "bond" as used in § 7(c).[9] Since the note is to be held by a single investor well qualified to judge the merits of the risk assumed, and because of the further fact that the loan agreement contains no provision for breaking up the note for sale to the public, we are of the opinion that the assets pledged are of such character as to satisfy the requirements of § 7(c) (1) (B) (iii).

The bonds which declarant proposes to issue and pledge as security for the above-described note are first mortgage and first lien bonds of declarant. Since the mortgage covers the physical assets of declarant and the lien attaches

[8] The estimated fees and commissions are divided among the declarant and applicants as follows:

Delaware	$8,400
Delmarva	2,600
Maryland	3,300
Virginia	2,200
	$16,500

[9] Secured notes have been found to be "bonds" within the meaning of § 7(c) in the following cases: In Re North Boston Lighting Properties (1937) 2 SEC 799; Re Southwestern Development Co. (1937) 2 SEC 815; Re Community Power & Light Co. Holding Company Act Release No. 1533, May 15, 1939; and Re International Utilities Corp. and General Water Gas & Electric Co. Holding Company Act Release No. 1708, August 31, 1939.

to all the outstanding securities, including first mortgage bonds on the physical properties of three specified subsidiaries of declarant, it would appear that the proposed bonds of declarant qualify under § 7(c) (1) (B) (i) and § 7(c) (1) (B) (ii).

The declarant has filed an opinion of counsel to the effect that no state securities commission has jurisdiction over the issue and sale of the proposed note and bonds. Furthermore, no state Commission or state securities commission has informed the Commission that any applicable laws have not been complied with. The provisions of § 7 (g) are therefore satisfied.

Because of the special facts and circumstances of this declaration, more particularly discussed above, including the need for the funds and the apparent unavailability of such funds except through the medium here employed, we are of the opinion no reason exists for making adverse findings with regard to § 7(d). The conservative policy regarding depreciation reserves and the payment of common stock dividends makes unnecessary during the transitory period prior to the contemplated refunding the consideration as to whether any action should be taken to increase the equity of the common stock. Subject to the terms and conditions hereinafter to be discussed, an appropriate order will be entered approving the declaration.

The applications of Delmarva, Maryland, and Virginia have been filed pursuant to § 6(b) of the act which provides that the Commission shall exempt from the provisions of § 6(a) "subject to such terms and conditions as it deems appropriate in the public interest or for the protection of investors or consumers" the issuance and sale of any securities "by any subsidiary company of a registered holding company, if the issue and sale of such security are solely for the purpose of financing the business of such subsidiary company and have been expressly authorized by the state Commission of the state in which such subsidiary company is organized and doing business. . . ."

As for Delmarva the net proceeds to be received by it from the sale of its securities described in its pending application are to be issued in part to retire existing debt obligations, the balance being used to assist in the construction of a needed generating plant. This security issue has been expressly approved by the Public Service Commission of Maryland by its order dated September 15, 1939, as amended November 27, 1939, in Case No. 4330. We accordingly find that the requirements of § 6(b) of the act have been met and subject to the terms and conditions hereinafter to be discussed, this application for exemption is granted.

As for Maryland the net proceeds to be received by it from the sale of its securities described in its pending application are to be issued in part to retire existing debt obligations, the balance being used to discharge open account obligations to Delmarva and Delaware. These security issues have been expressly approved by the Public Service Commission of Maryland by its order dated September 13, 1939, as amended November 27, 1939, in Case No. 4328. We accordingly find that the requirements of § 6(b) of the act have been met and subject to the terms and conditions hereinafter to be dis-

cussed, this application for exemption is granted.

As for Virginia the net proceeds to be received by it from the sale of its securities described by its pending application are to be issued in part to retire debt obligations, in part to discharge open account obligations to Delaware, the balance being used to reimburse Virginia's treasury for physical additions actually made to its property. This security issue has been expressly approved by the Corporation Commission of the commonwealth of Virginia by its order dated September 13, 1939, as amended December 1, 1939, in Case No. 6839. We accordingly find that the requirements of § 6 (b) of the act have been met and subject to the terms and conditions hereinafter to be discussed, this application for exemption is granted.

Delaware has filed an application pursuant to § 10(a) (1) of the act seeking approval of the acquisition by it of all the securities which Delmarva, Maryland, and Virginia presently propose to issue. Section 10(b) provides that if the requirements of § 10(f) are satisfied, the Commission shall approve the acquisition unless the Commission makes adverse findings with respect to certain specific matters, including consideration, fees, and commissions. The requirements of subsection 10(f), providing that the Commission shall not approve any acquisition unless it appears that the applicable state laws have been complied with, appear to have been satisfied.

Section 10(c) provides that notwithstanding the provisions of § 10 (b) the Commission shall not approve an acquisition which is unlawful under § 8 or is detrimental to the carrying out of the provisions of § 11, nor unless it finds that such acquisition will serve the public interest by tending towards the economical and efficient development of an integrated public utility system. Section 8 is inapplicable.

For the reasons set forth above we do not make adverse findings under § 10(c) (1). As for § 10(c) (2), the testimony of the engineer taken at the public hearing was to the effect that the proposed new generating plant would tend toward the efficient and economic development of an integrated public utility and we see no basis for questioning this testimony.

Form of Order

The Commission finds it to be appropriate in the public interest and for the protection of investors and consumers that its order be subject to the following conditions:

1. That the steps involved in the declaration and various applications shall be carried out and effected respectively as set forth in and for the purposes represented by such declaration and applications as amended.

2. That the bonds to be pledged as security for declarant's note shall not be sold except at a bona fide sale by or on behalf of the pledgee, or its successors or assigns, to satisfy said note, or by the purchaser at such sale, or by his or its successors or assigns.

3. That the respective exemptions hereby granted shall immediately terminate without further order of this Commission if at any time the pertinent authorizations, or any of them, of the Public Service Commission of

Maryland and/or Corporation Commission for the commonwealth of Virginia shall be revoked or shall otherwise terminate;

4. That within ten days after the issue and sale of such securities and within ten days after the consummation of the other transactions set forth in the applications the declarant and applicants shall file with this Commission a certificate of notification showing that the issue and sale of such securities and the execution of the other proposed transactions have been effected as set forth in and for the purposes represented by the declaration and applications as amended and in accordance with the terms of this order.

5. That when all expenses incurred in connection with the issue and sale of the securities and the preparation and prosecution of the declaration and applications concerned with the present transactions shall be actually paid, the declarant and applicants shall file a detailed statement of such expenses showing the names of persons or entities to whom such payments were made, the amounts of such payments, the accounts charged, and a detailed description of the services rendered for which such payments were made.

MONTANA SUPREME COURT

Tobacco River Power Company

v.

Public Service Commission et al.

[No. 7955.]

(— Mont —, 98 P(2d) 886.)

Valuation, § 36 — Basis for rate making — Prudent investment theory — Present value.

1. The prudent investment theory is not the proper method for determining fair value of utility property for rate-making purposes, since the statute indicates that present fair value of such property should be ascertained for that purpose and no specific and exclusive method is prescribed by statute, p. 155.

Return, § 50 — Confiscation.

2. The Commission cannot fix utility rates so low as to result in the taking of property without just compensation to the owner, p. 155.

Rates, § 120 — Reasonableness.

3. Rates charged by a public utility must be just and reasonable, p. 155.

Return, § 15 — Reasonableness.

4. The return to a public utility on its investment and for service rendered must be fair, just, and reasonable, p. 155.

Valuation, § 21 — Method for ascertaining rate base — Limitations.

5. Neither the Commission nor the public utility is limited to any particular method of determining fair value of utility property for rate-making purposes, except that it must be done under proper legal procedure and restrictions, p. 156.

Valuation, § 39 — Reproduction cost new — Evidence.

6. A court may properly allow evidence of cost of reproduction new less depreciation as evidence of value of utility property for rate-making purposes in a suit to enjoin enforcement of a Commission order reducing electric rates, p. 156.

Valuation, § 22 — Court review — Evidence of changes.

7. The court hearing a suit to enjoin enforcement of a Commission order reducing electric rates properly considered changes in valuation of the utility between the date of the hearing before the Commission and the date of this action, and the Commission should have considered such evidence when the court referred the matter to it under Revised Codes, § 3906, p. 156.

Valuation, § 26 — Court review — Equipment acquired after rate order.

8. The court, in a suit to enjoin enforcement of a Commission order reducing electric rates, properly considered the value of a Diesel engine, used by the utility in the production of electricity, which was purchased subsequent to the hearing before the Commission but prior to this trial, in determining the fair value of the utility property for rate-making purposes, p. 157.

Valuation, § 221 — Factors considered — Water rights.

9. A water right which is part of the production system of an electric company is properly considered in determining the fair value of utility property for rate-making purposes, p. 157.

Valuation, § 409 — Evidence — Expert testimony.

10. The court, in a suit to enjoin a Commission order reducing electric rates, properly allowed a public accountant and auditor, who had set up the bookkeeping system of the utility and was familiar with its books, reports, and accounts, as well as its property, to testify as to the value of such property, p. 158.

Appeal and review, § 56 — Reversible error — Exclusion of evidence.

11. Exclusion by the trial court of proposed testimony by an auditor of the Commission and other witnesses relating directly to the value of utility property is reversible error in a suit to enjoin a Commission order reducing rates; even though part of the proposed evidence appears to have little value, this weakness goes to its weight rather than admissibility, p. 158.

Appeal and review, § 67 — Reversal and remand — Consideration of new evidence.

12. The ends of justice will best be served by a new hearing with opportunity thereafter for the Commission to review all different or additional evidence and make an appropriate order, where an appellant Commission, through misapprehension of procedure not previously before the appellate court for interpretation, proceeded in an improper manner when the transcript of the evidence was sent to it by a trial court reviewing a Commission order reducing rates, p. 158.

Service, § 320 — Facilities — Electric utility — Telephone.

13. The Commission did not abuse its discretion in ordering an electric company to install a telephone as part of its service to its customers, where the evidence showed that the telephone service was necessary for the convenience of the customers, p. 159.

Valuation, § 91 — Accrued depreciation — Necessity of deduction.

14. In determining the reproduction cost of utility property in connection with the ascertainment of value for rate-making purposes, the amount of the existing depreciation of plant and equipment must be ascertained and deducted from the cost of reproducing them new, although they are presently capable of rendering substantially the same service as if new, and although the effect of depreciation may be neutralized by adequate upkeep and reasonable replacements, p. 159.

Valuation, § 83 — Accrued depreciation — Obsolescence.

15. Deduction should be made not merely for physical deterioration but also for obsolescence in determining present fair value for rate-making purposes; but future depreciation cannot be taken into account, p. 159.

Valuation, § 96 — Accrued depreciation — Physical condition.

16. The amount to be deducted for depreciation should be determined by a careful consideration of the actual facts respecting the physical condition of the particular property under consideration, p. 159.

Valuation, § 96 — Accrued depreciation — Deduction from reproduction cost — Service value.

17. The amount to be deducted from cost of reproduction new for depreciation of utility property, in ascertaining value for rate-making purposes, should be determined by the actual reproduction value of the property in question and not by its service value, p. 159.

Valuation, § 101 — Accrued depreciation — Inspection method.

18. Accrued depreciation of utility property should be ascertained by actual inspection or examination of the property, especially where the age of the various items of property is different or the depreciation is wanting in uniformity, and such method of determination is preferable to calculations or estimates based merely upon probabilities; but the ultimate determination must, to some extent, involve estimates and opinions, p. 159.

Valuation, § 102 — Accrued depreciation — Straight-line or percentage standard — Age of property — Probable life.

19. Resort to the so-called straight-line or percentage standard, which is based upon the age of the property in question and its probable life and usefulness, is proper in determining accrued depreciation to the extent that estimates and opinions based upon probabilities are involved, p. 159.

Valuation, § 104 — Accrued depreciation — Reserve as measure.

20. Depreciation is not to be measured by the amount of a depreciation reserve fund set up by a utility, but the maintenance of such a fund in an amount greater than the depreciation claimed by the utility constitutes an admission against interest, which has more evidentiary value than estimates of experts, although not irrevocably binding upon the utility, p. 159.

Depreciation, § 26 — Right to allowance — Effect of reserve accumulated.

21. An annual allowance for depreciation should not be reduced or practi-

cally eliminated because of an excessive depreciation reserve accumulated, p. 160.

[January 5, 1940. Rehearing denied February 14, 1940.]

APPEAL from judgment for plaintiff in suit to enjoin enforcement of Commission order reducing electric rates; reversed in part and remanded with directions.

APPEARANCES: John W. Bonner, of Helena, for appellants; E. G. Toomey, of Helena, and Grubb & Rockwood, of Kalispell, for respondent.

ARNOLD, J.: The respondent Tobacco River Power Company is a small utility corporation furnishing electrical energy for residents of the town of Eureka, Lincoln county, Montana, there being about 225 customers in the town. On May 27, 1930, a schedule of rates, filed by the utility company, was approved by the Montana Public Service Commission. On April 17, 1936, a hearing was had by the appellant Public Service Commission to determine the reasonableness of the rates then in effect. The respondent appeared and offered evidence as to the reasonableness of the rates. On July 7, 1936, the appellant made a report and order substantially reducing the rates, and also ordering the respondent to install a telephone as part of its service to its customers. Respondent, being dissatisfied with the order of the Commission, filed its complaint in the district court of Lincoln county, asking for an injunction pendente lite enjoining the appellant from enforcing the order of reduction and that upon final hearing of the cause the injunction be made permanent. The court issued the injunction prayed for, and the amounts representing the difference between the prevailing and reduced rates have since been deposited with the clerk of the district court of Lincoln county.

On May 24, 1938, the court on its own motion set the cause for hearing. Both parties appeared and offered evidence. After the hearing was concluded the court, pursuant to § 3906, Revised Codes, as amended by Chap. 56, Laws of 1937, caused to be transmitted to appellant a transcript of the testimony, and thereafter, on November 29, 1938, appellant advised the court that it would not modify, alter, amend or rescind the order from which the respondent took its appeal. Accordingly, on December 20, 1938, the court found all issues in favor of the respondent and entered its judgment and decree. From that judgment this appeal is prosecuted, the appellant asking that this court uphold the order of the Public Service Commission, or that the judgment be reversed so that all relevant evidence be received in order that the trial court be properly guided in determining whether or not the order of the Commission is reasonable or unreasonable.

The appellant assigns certain errors on the part of the trial court, which we shall take up in the order specified. First, that the evidence was insufficient to authorize the court to determine the value of the utility in order to determine whether or not the order of

the Public Service Commission complained of was unlawful or unreasonable. It is the appellant's contention that the court relied solely on what is known as the reproduction cost less depreciation theory in determining the fair value of the utility for rate-making purposes. In this respect the court found that the value of the utility was in excess of $40,000. From the evidence introduced it is not possible for us to say that the court excluded consideration of other evidence and methods for determining value.

[1] The appellant contends strongly for the prudent investment theory as the proper method for determining fair value of the utility, and cites numerous magazine articles written by economists and dissenting opinions of various Federal court judges in support of its contentions. Its position is untenable, if regarded as an exclusive method, as we believe that § 3884, *infra,* indicates that present fair value of the utility should be ascertained for the purpose of rate making.

No specific and exclusive method for determining value is mentioned in the Montana Code. Section 3884, Revised Codes, reads as follows: "The Commission may, in its discretion, investigate and ascertain the value of the property of every public utility actually used and useful for the convenience of the public. In making such investigation the Commission may avail itself of all information contained in the assessment rolls of various counties, and the public records of the various branches of the state government, or any other information obtainable, and the Commission may at any time of its own initiative make a revaluation of such property."

[2] The power of the state in regulating utility companies is very similar to the power of the state in eminent domain proceedings. Under the power of eminent domain a state may condemn and acquire private property for public use, but before doing so must compensate the owner. In other words, must make him whole, which merely means that it pays him the value of the property which is condemned and taken. In exercising its power of regulating rates of a utility company it appraises the value of the property, determines from evidence the cost and expense of operating the utility, allows for depreciation and fair return on investment, and thereupon fixes rates for service to be rendered, which in effect is a restriction on the use, enjoyment, and profits which the owner of the utility may have. In effect, the order of the Public Service Commission limits and regulates the use of the property so far as profit is concerned and quality of service rendered, but leaves the management of the business in private hands with the attendant obligations of rendering service, meeting costs of operation and exaction of government in the way of taxes. The Commission cannot under the law fix rates so low as to result in taking of property without just compensation to the owner.

[3, 4] The law is well settled in all jurisdictions, including Montana, that rates must be just and reasonable, and likewise the return to the utility company on its investment and for service rendered must be fair, just, and reasonable. Great Northern Utilities Co.

v. Public Service Commission, 88 Mont 180, PUR1930E 134, 293 Pac 294; Minnesota Rate Cases (1913) 230 US 352, 57 L ed 1511, 33 S Ct 729, 48 LRA(NS) 1151, Ann Cas 1916A 18; Smyth v. Ames (1898) 169 US 466, 42 L ed 819, 18 S Ct 418. No great difficulty should be experienced in determining fair value of the property of the utility company and just and reasonable rates which may be charged if both parties to a proceeding to determine the ultimate facts are candid, reasonable, and fair with each other.

[5] It is observed from § 3884, *supra,* that considerable latitude is allowed the Public Service Commission in determining value. Neither the Public Service Commission nor the utility company is limited to or bound by any particular method in arriving at the solution of the question of value. It must be borne in mind always that the ultimate fact to be determined is value upon which rates are based, which must of course be done under proper legal procedure and restrictions.

[6] The cost of reproduction new, less depreciation, is usually regarded as one of the most important, if not the dominant, factor, in the determination of value. 51 CJ 17. Under the section of the Montana Code just cited, assessment rolls are likewise admissible as evidence of value, but of course are not exclusive. When the state condemns property of a landowner it frequently resorts to assessed valuations as evidence, but more often than not the jury will determine damages and valuation in excess of that set out in the assessment rolls. Original cost, assessment values, cost of reproduction new, prudent investment theory, public records mentioned in § 3884, *supra,* and opinions of value are all means to an end, namely the determination of value. We can find no error in the procedure of the court in allowing evidence of cost of reproduction new, less depreciation, to be admitted as evidence of value.

[7] The next assignment of error is that the court erred in determining the value of the utility on the date of the trial, rather than on the date the Commission issued the order complained of. On April 17, 1936, the appellant took evidence of the reasonableness of the rates, and the trial on the appeal from its order took place on May 24, 1938. On account of the long period of time intervening it is important that this question be settled, as considerable change could, and did, take place within that period of time.

Section 3906, Revised Codes, as amended by Chap. 56, Laws of 1937, reads in part as follows: "If, upon the trial of such action, evidence shall be introduced by the plaintiff which is found by the court to be different from that offered upon the hearing before the Commission, or additional thereto, the court, before proceeding to render judgment, unless the parties to such action stipulate in writing to the contrary, shall transmit a copy of such evidence to the Commission, and shall stay further proceedings in said action for fifteen days from the date of such transmission. Upon receipt of such evidence, the Commission shall consider the same, and may modify, amend, or rescind its order relating to such rate or rates, fares, charges, classifications, joint rate or rates, regulation, practice, or service complained of

in said action, and shall report its action thereon to said court within ten days from the receipt of such evidence.

"If the Commission shall rescind its order complained of, the action shall be dismissed; if it shall alter, modify, or amend the same, such altered, modified, or amended order shall take the place of the original order complained of, and judgment shall be rendered thereon, as though made by the Commission in the first instance. If the original order shall not be rescinded or changed by the Commission, judgment shall be rendered upon such original order."

It is thus seen that evidence different from that offered upon the hearing before the Commission, or additional thereto, may properly be offered upon the trial. This certainly would admit all evidence of any change in valuations, additions to a plant, or any other evidence that might affect the determination of the question whether the order of the Commission was unlawful or unreasonable. This is further borne out by the fact that the court, before proceeding to render judgment, is directed to transmit a copy of such evidence to the Commission for its further consideration, whereupon it might modify, amend, or rescind its order relating to rates, etc.

An order of a Commission relating to rates or service may be based upon some deficiency of the utility company which might be supplied between the date of the hearing before the Public Service Commission and the date of trial before the district court, which should, of course, be considered by the Commission when the matter is referred to it by the court. It is not inconceivable that after a hearing before the Public Service Commission and before a trial on appeal to the district court, through the enactment of new or extension of old law, enormous increase in the exactions of government may take place through capital levies, payroll taxes, social security taxes, unemployment and industrial accident assessments. Thus the district court may receive a different view of the questions presented on appeal, the evidence relating to which the law requires it shall transmit to the Commission for its further consideration, before judgment is entered. The law seeks to avoid a multiplicity of hearings and suits, eliminate expense and permit a determination of the questions at issue in a fair and prompt manner. The question of determining values and rates is not a matter of catch as catch can, but should be entered into by both parties to the proceeding honestly and fairly.

We conclude that the district court did not err in considering changes which took place in valuation of the utility company between the date of the hearing before the Public Service Commission and the date of the trial before it, and that the Public Service Commission should have considered such evidence when the district court referred the matter to the Commission.

[8, 9] The next specification of error relates to alleged illegal items which the court considered as constituting value of the utility, and refers to the purchase of a Diesel engine which the utility used in the production of electricity. The purchase of the engine was made after the hearing before the Public Service Commission and before the trial in the district court, the cost

being several thousand dollars. For the reason stated above, there was no error on the part of the court in considering the value of this item. The court likewise considered the value of the water right. This being part of the production system of the utility company, it was a proper item of value to be considered.

[10] The next specification of error relates to testimony of the witness Ferris on the ground that he was not qualified. It was shown that Ferris was a public accountant and auditor who had set up the bookkeeping system of the respondent and who was familiar with the plant, its books, reports and accounts, as well as its property. We find no error in allowing him to testify.

[11] The next specification of error relates to the refusal of the court to permit witnesses on the part of appellant to testify, namely Harlan, an auditor of the Public Service Commission, who had accounting and utility accounting experience, and one Scott and Kuchan. The testimony of these witnesses, it would appear from the offer of proof, would be similar to that of the witness Ferris and should have been admitted. We believe the court committed reversible error in refusing the admission of the proposed evidence from these witnesses, as their proposed testimony relates directly to value of the respondent's property. While part of the proposed evidence from these witnesses appears to have little value, yet this weakness goes to its weight rather than admissibility. Respondent contends that refusal to admit this offer would at most be harmless error, as the valuations the witnesses placed on the property would still not permit a return, under the new rates, sufficient to meet operating costs, let alone return on investment. If this result were shown to exist after proper procedure on the part of the Commission, we would be constrained to agree with respondent. As pointed out heretofore, the Commission, through misconstruction of the law, did not proceed properly, after the transcript of the evidence was sent to it by the trial court. One of the purposes of requiring the trial court to transmit, before judgment, different or additional evidence to the Commission is to afford the Commission an opportunity to correct its errors, as courts do not possess the power to fix rates. Upon such transmission the Commission may "modify, amend, or rescind its order relating to such rates." Thus, while the evidence before the trial court might show rates to be unlawful or unreasonable, a modification of the Commission's order might save the work done by the Commission and trial court, obviate a new hearing, and prevent injustice which would result from releasing all moneys impounded, pending the hearing.

[12] There was unreasonable delay on the part of the parties to this cause, in bringing it on for trial in the district court. The law requires that such matters be promptly disposed of, and they are given preference on the calendar. In this particular instance, where the appellant Commission, through misapprehension of procedure not previously before this court for interpretation, proceeded in an improper manner, we believe the ends of justice will best be served by a new hearing, with opportunity thereafter for the Com-

mission to review all different or additional evidence and make an appropriate order.

[13] The next specification of error is to the effect that the court erred in deciding the telephone ordered installed by the Commission was not necessary in order to give service to patrons of the utility. The appellant does not seem to have abused its discretion in ordering this service. The evidence apparently supports the order that telephone service is necessary for the convenience of the customers, and at least does not show that the Commission's order was unlawful or unreasonable.

[14–20] The last specification of error is that the court erred in considering evidence as to depreciation because of the manner in which depreciation funds were used by the utility. The question of depreciation, its amount and method of ascertainment, seems to be a rather troublesome one in proceedings of this nature. The rules which appear to be followed in most jurisdictions, including Montana, are set out in 51 CJ 19, as follows:

"Where, in connection with the ascertainment of the present fair value of the property of a public utility, its reproduction cost is to be determined, the extent of the existing depreciation of plant and equipment must be ascertained and deducted from the cost of reproducing them new, notwithstanding they are presently capable of rendering substantially the same service as if new, and even though the effect of depreciation may be neutralized by adequate upkeep and reasonable replacements. Deductions should be made not merely for physical deterioration, such as wear, decay, and depreciation, but also for obsolescence. Future depreciation is, of course, not to be taken into account.

"The amount to be deducted from the cost of reproduction new for depreciation is not controlled by any theoretical rule or measure, but should be determined by a careful consideration of the actual facts, respecting the physical condition of the particular property under consideration. The amount to be deducted should be determined by the actual reproduction value of the property in question, and not by its service value, that is, the relative usefulness in service of the particular item or appliance at the time to which the inquiry relates as compared to a new item or appliance of the same kind. The accrued depreciation should be ascertained, where possible, by actual inspection or examination of the property, especially where the age of the various items of the property is different or the depreciation is wanting in uniformity, and such method of determination is always preferable to calculations or estimates based merely upon probabilities; but at best the ultimate determination must, to some extent, involve estimates and opinions, and in many particulars nothing better than estimated averages, based upon probabilities, is available. Accordingly, as to such matters it is proper to resort to the so-called 'straight-line' or percentage standard, which is based upon the age of the property in question and its probable life and usefulness, and assumes the accrual of depreciation at a uniform rate over the entire period. The so-called 'curved line' rule, which assumes that depreciation accrues

slowly at first and more rapidly toward the end of the life of the property, is even more purely theoretical than the 'straight-line' method, and accordingly is not ordinarily to be adopted.

"Depreciation is not to be measured by the amount of a depreciation reserve fund set up by the utility, since it does not represent actual depreciation, but only what observation and experience suggest is likely to accrue, with some margin over. However, the maintenance of such a fund in an amount greater than the depreciation claimed by the utility at the time of the inquiry constitutes an admission against interest, which, although not irrevocably binding upon the utility, has more evidentiary value than mere estimates of outside experts."

[21] We observe that the appellant Commission's witness Burke disregarded the straight line or percentage standard for determining depreciation, and also apparently disregarded the customary procedure for determining depreciation as set out in the rules of the Public Service Commission. He believed that because an annual charge had been allowed to accumulate on the books as depreciation to the extent of about $16,000, it was ground for reducing or practically eliminating the depreciation allowance. This, of course, is not the correct rule. See "Depreciation Reserve," *supra,* in 51 CJ. However, the Public Service Commission allowed $1,000 per year to the utility company for depreciation. We cannot say as a matter of law, or from the evidence at the trial, that this figure is too low; but, of course, the matter should have been reconsidered in the light of additional and different testimony offered at the trial, which apparently the Public Service Commission disregarded.

In view of the errors occurring at the trial on the part of the court and the refusal of the Public Service Commission to give due consideration to the testimony adduced thereat upon receiving a transcript of the evidence from the court, it will be necessary to have a rehearing of at least some of the issues involved in this proceeding.

The judgment is reversed except as to the order of the Public Service Commission relating to the installation of the telephone, wherein it is ordered that the respondent comply therewith, and the cause is remanded to the district court with directions to hear the evidence indicated in this opinion, and such additional evidence as may be pertinent to the issues herein, and thereafter to comply with § 3906, Revised Codes 1935, as amended by Chap. 56, Laws of 1937. Each party to this proceeding shall pay its own costs on appeal.

Johnson, C. J., Morris, and Erickson, JJ., and McKinnon, D. J., sitting in place of Angstman, J., disqualified, concur.

HAWAII PUBLIC UTILITIES COMMISSION

Re Hawaiian Electric Company, Limited

[Docket No. 561, Decision No. 47, Order No. 327.]

Valuation, § 122 — Overhead charges — Items charged to operation.

1. Overhead charges which, excepting interest during construction, were charged to operating expenses at the time they were incurred, instead of being charged to capital, should not at a later date find their way into the rate base, p. 165.

Valuation, § 30 — Rate base determination — Investment and reproduction cost measures.

2. The difference between investment and reproduction cost should not find its way into the rate base, p. 167.

Valuation, § 32 — Rate base determination — Reproduction cost — Historical cost.

3. Historical cost is to an extent a more reliable measure of a significant reproduction cost than "spot" reproduction cost estimates, p. 168.

Valuation, § 39 — Rate base determination — Reproduction cost measure.

4. The matter of reproduction cost must be considered and given proper weight in determining the rate base, p. 168.

Valuation, § 27 — Rate base determination — Factors considered.

5. Due consideration is given to original cost, historical cost and evidence as to reproduction cost, together with other factors, in determining the rate base, p. 168.

Valuation, § 104 — Accrued depreciation — Book reserve as measure.

6. The full amount of the book reserve for depreciation cannot legally be deducted to determine depreciated value even though excessive charges have been made to operating expenses in the past for depreciation, p. 169.

Valuation, § 97 — Accrued depreciation — Relation to annual charge.

7. Deduction from value new to determine present value should be the amount of accrued depreciation determined in a manner consistent with the basis on which the annual charge for depreciation allowed as an operating expense is determined, p. 169.

Depreciation, § 32 — Straight-line or sinking-fund method.

8. The 5 per cent sinking-fund method of depreciation may properly be used rather than the straight-line method when preferred by the utility company, since both theories provide for the recovery of the service value over the life of the property and, if consistently applied with respect to both accrued and annual depreciation, there is for normal properties but little difference in the amount required at any particular time for depreciation and allowable return combined, p. 169.

Valuation, § 100 — Accrued depreciation — Age-life method.

9. The deduction for accrued depreciation should be the reserve applicable to the property in service based on the age of the existing property in relation to the anticipated life of that property, p. 169.

Accounting, § 19 — Customer contributions — Amortization.

10. Amortization of customer contributions over a period of years, in equal annual instalments, to nonoperating income is not in accordance with good rate-making procedure, p. 171.

Accounting, § 19 — Customer contributions — Depreciation.

11. Contributions in aid of construction may properly be handled by charging all new construction to the appropriate property account without reference to the source of the funds; then computing annual depreciation in the first instance against all property in service, including contributed property, and offsetting the depreciation computed against contributed property by amortizing to depreciation reserve (over a period approximately equivalent to the estimated service life of the property constructed out of contributions) the amount of each year's contributions credited in that year to the contributions account; and then deducting the total amount of the amortization in each calendar year from the computed amount of annual depreciation for that year, so as to make the balance the charge to operating expenses for depreciation; after which all retirements of property would then be charged to depreciation reserve, p. 171.

Valuation, § 250 — Customer contributions — Deduction.

12. Deduction from the rate base should be made on account of customer contributions to the extent that such contributions have not been amortized in connection with provisions for depreciation, p. 171.

Valuation, § 251 — Customers' advances — Deduction.

13. The unrefunded balance of customers' advances for construction should be deducted from the rate base, p. 171.

Valuation, § 289 — Working capital.

14. The amount of working capital to which a utility is entitled as a part of the rate base is an amount representing the extent to which the investors' money is tied up in operating expenses and in materials and supplies required for operation, plus necessary prepayments and working funds, including a reasonable amount to be maintained as a bank balance, p. 173.

Rates, § 196 — Unit for rate making — Merchandising operations.

15. Merchandise operations of an electric company were treated as a part of its utility business in a rate proceeding, p. 173.

Valuation, § 304 — Working capital — Merchandise.

16. Working capital should be allowed for merchandising operations when such operations are treated as a part of the utility business, p. 173.

Valuation, § 332 — Going value.

17. Fair value for rate-making purposes is taken into consideration and full allowance is made for the fact that the property is a going concern with customers attached and in successful operation and earning a return, without any separate allowance for going value, p. 174.

Depreciation, § 26 — Annual charge — Consistency with accrued depreciation.

18. The theory applied in determining the annual charge to be allowed for depreciation should be consistent with the manner in which the deduction from the rate base on account of accrued depreciation is determined ,p. 174.

Depreciation, § 27 — Basis — Vehicles and equipment — Charges to other account.

19. Deduction should be made from the annual depreciation expense computed on the property as a whole to offset depreciation charges on vehicles and other equipment which is charged to clearing accounts so that the amount of depreciation in these accounts is included among other operating expenses, p. 175.

Depreciation, § 13 — Basis — Customer contributions.

20. Depreciation computed against property constructed out of contributions should not be charged to consumers as an operating expense, but should be provided by a charge to the account for contributions in aid of construction, p. 175.

Depreciation, § 14 — Basis — Historical cost.

21. Rates of depreciation based on the lives and salvage value estimated for property should be charged on the historical cost of existing property and the cost of additions until such time as a change may be ordered or authorized by the Commission, p. 175.

Expenses, § 91 — Rate case expense — Resistance to proper rate deduction.

22. Rate case expense is legally to be allowed even when the expense is incurred in resisting a rate reduction which is later shown to be justified, p. 175.

Expenses, § 92 — Rate case expense — Amortization.

23. Rate case expenses were amortized over a period of ten years, p. 175.

Return, § 87 — Electric utility.

24. Electric rates were determined at a level which would have returned 6¼ per cent on the average of the rate bases for the beginning and end of the previous year, subject to future modifications, without making a finding as to a fair rate of return, p. 176.

[February 19, 1940; March 18, 1940.]

INVESTIGATION *of electric rates; rate reductions ordered.*

By the COMMISSION: This proceeding was initiated by resolutions passed by the Commission on April 12, 1935, and December 9, 1937, in which it was, among other things, resolved:

"That an investigation into the affairs of the Hawaiian Electric Company, Limited, be undertaken by this Commission, such investigation to embrace all matters relevant to the fixing of rates, classifications, rules, and practices; said investigation to include, among other things, the ascertaining of a fair and reasonable value of the company's utility property assets, used and useful in the supplying of electrical energy to the public of the Island of Oahu; the establishing of a fair rate of return and an analysis and study of the company's revenues and all expenses, and allocations thereof which are justly applicable to the utility department operations, . . ."

During the five years which have elapsed since the original resolution the Commission proceeded with the investigation which was interrupted for a time by lack of funds. Early in 1939, funds meantime having become

available, Mr. William A. Dittmer was engaged to supervise the completion of the investigation and arrived here on May 3rd, since which time he has been steadily at work on the investigation. In July, 1939, Mr. Carl I. Wheat also spent several weeks here as consultant, more particularly on the legal matters involved.

On November 13, 1939, the Commission, by resolution, set a public hearing for November 28th. Notice thereof was served on the company and publication made in the newspapers as required by law.

At the hearing on November 28th, counsel for the company attacked the sufficiency of the notice given and asked a postponement of at least two weeks for further time to study a report on the affairs of the Hawaiian Electric Company, Limited, which had been prepared by Mr. Dittmer and the regular members of the Commission's staff. Counsel for the company stated that he would waive any defect on account of notice, if the hearing was postponed to December 13, 1939. The hearing was thereupon adjourned to December 13, 1939. At this hearing, in addition to copies of the resolutions and of notice and publication, there was introduced in evidence as Exhibit 1 a "Report on the Affairs of the Hawaiian Electric Company" which had been prepared by the Commission's staff, together with testimony by three witnesses who gave very brief summaries of the contents of the several sections of the report and stated the sources of the figures used in the report.

Meantime, representatives of the company had met with representatives of the Commission and the essentials of rate base, depreciation, amount of rate reduction, and rate schedules, as proposed by the Commission, had been substantially agreed to by the company, all as set forth in a statement of some length made at the hearing by the chairman.

This decision is intended to set forth the reasoning and conclusions of the Commission which led it, on the basis of information supplied by the staff and now embodied in Exhibit 1, to suggest, at the company's request, a basis of settlement, the acceptance of which, with some relatively unimportant modifications, has resulted in an immediate and substantial reduction in rates, and avoidance of the expense of long drawn-out hearings.

Substantially all of the evidence as to the facts is contained in Exhibit 1, entitled "Report on the Affairs of the Hawaiian Electric Company, Limited," a volume of 310 pages composed of a large number of tables and charts together with explanatory text.

Section I—*History and Development*—shows that the company was organized in 1891 and has grown continuously and consistently to the present time.

Section II—*Financial Data*—contains text and tables which show the earnings and other financial data from the inception of the company, together with detailed balance sheet and income accounts for the last five years. This evidence shows that the company's earnings have increased steadily making possible the payment of cash dividends of not less than 6 per cent on its stock in every year since 1901, and, in addition thereto, several substantial stock dividends. The average cash dividend for the 46-year period from

1893 to 1938 was 8.64 per cent, and if stock dividends are included, the percentage is 12.77 per cent.

Book Cost—The book cost of the utility property of the company as of December 31, 1938, as shown by the balance sheet of that date, was $14,960,307.15.

Section III—*Inventory*—shows that the company made a physical inventory of its property, in part as of June 30, 1933, and in part as of December 31, 1934, which inventory was checked by members of the Commission's staff and found to be a substantially accurate list of the property in service at the time. The company's inventory, with the necessary changes to bring it down to date, is therefore accepted as correct.

Original Cost—The Commission's staff made a determination of the original cost of the utility property of the company in service at December 31, 1938, in accordance with the principles stated in the Uniform System of Accounts adopted for electric utilities by the National Association of Railroad and Public Utilities Commissioners. This cost represents, as nearly as the Commission's staff has been able to ascertain, the actual cost of the property as recorded in the company's books at the time of construction. The initial determination was made as of December 31, 1934, from which date it was brought down to December 31, 1938, by adding the cost of additions and deducting the original cost of retirements made. The original cost of the utility property of the company in service at December 31, 1938, as thus determined was $14,716,596.99.

Historical Cost—Section V of Exhibit 1, includes a detailed statement, largely in the company's own words, of the manner in which the historical cost was computed. What was done can be stated in a very few words: Essentially the company applied to the units of property shown in the inventory the base costs as actually incurred and charged on the books, based on a detailed analysis of a large part of the work orders for the 11½-year period January 1, 1922, to June 30, 1933. As to indirect costs, such as store expense, tool expense, transportation, and overheads, such as engineering and supervision, interest and taxes during construction, general and administrative expense, etc., the costs as actually charged to work orders were ignored and different, and in most cases larger, percentages were added to the several types of property on the basis of what the company now feels after a reconsideration of the facts, in the light of present knowledge or theory, *might* or *should* have been charged at the time.

[1] Substantially all of the difference between the original cost as determined by the Commission's staff and the historical cost as determined by the company is due to the additional indirect charges and overheads included in the historical cost. The total difference at the end of 1937 was $1,129,717 of which $475,976 was accounted for by indirect costs and the balance of $653,741 by overheads. At the end of 1938 the difference had diminished slightly to $1,113,963, but the record does not furnish a basis for making an exact split between indirect charges and overheads. The principal question is as to the consideration to be given to these added charges in the determination of the rate base. All of

the charges now proposed to be capitalized, excepting interest during construction, were charged to operating expenses at the time they were incurred. As late as the year 1937 the company charged approximately $109,000 to operating expense accounts, which according to the basis on which the historical cost determination was made should have been charged to capital. Had this been done, the return in 1937 would have been increased by $109,000 over the amount actually reported by the company for the year.

There are a number of reasons why we feel that these overhead charges should not find their way into the rate base.

In the first place, there is a very practical consideration. The decision as to just what items are to be charged to operation and what to construction lies in the first instance with the management. If the company will not abide by the decision of its management, regulation will have to be recast so as to function in about the same field as management. This would lead to a situation that we believe the utilities would rather avoid, even at the expense of foregoing the return which inclusion of the overheads in the rate base would bring.

In the second place, we do not believe that past and future investors in the enterprises have been, or will be, influenced by a hidden surplus accruing by erroneous charging of overheads The presumption must be that the possibility was unrecognized and will not be anticipated. This being so, it appears entirely unnecessary to allow these overheads as an element of sustaining the enterprise.

It appears to be the rather general practice of state Commissions to disallow such overheads. Various Commissions, e.g., New York, Re Westchester Lighting Co. (1936) 15 PUR (NS) 299, 310; Pennsylvania, Public Utility Commission v. Duquesne Light Co. (1937) 20 PUR(NS) 1, 10; Illinois Commerce Commission v. Commonwealth Edison Co. (1936) 15 PUR(NS) 404; California, Re Los Angeles Gas & E. Corp. 38 Cal RCR 833, PUR1933E, 317, have all taken such a position on the general ground that to include them would be wanting in equity. The New York Commission said in the above case "The plan has uniformly been rejected."

The courts have sustained disallowances on occasions.

Natural Gas Co. v. Public Service Commission, 95 W Va 557, PUR 1924D 346, 121 SE 716; Peoples Gas Light & Coke Co. v. Slattery (1939) — Ill —, 31 PUR(NS) 193, 25 NE (2d) 482.

These court decisions contain many citations.

The supreme court of the Territory of Hawaii expressed disapproval of the *idea* in speaking on another matter, saying "Courts will not extract from consumers income upon a sum which has already been returned to the company as income." Honolulu Gas Co. v. Public Utilities Commission (1935) 33 Haw 487, 510.

The Supreme Court of the United States has never spoken specifically in the matter, although it is contended by some that some of the court's decisions, for instance, Public Utility Comrs. v. New York Teleph. Co.

271 US 23, 70 L ed 808, PUR1926C 740, 46 S Ct 363, indicate the court's requirement that such overheads be included in the rate base.

These considerations of the practicalities and the law in the matter have influenced our judgment in the finding of a reasonable value new as set forth below.

Section VI—*Reproduction Cost*—No detailed reproduction cost figures were submitted for the record. However, the company's historical cost was available, broken down to show the surviving property by years of installation for the separate accounts, and Exhibit 1 shows the results of trending the historical cost from the years of installation to 1938 price levels, and to average prices for the 5-year period 1934–1938, by means of the Lambert and Handy (Pacific Division) indexes of the costs of electrical construction. These indexes are published annually by the Engineering News Record and are widely accepted as indicators of the trend of utility construction costs. Certain other computations are also shown, but we pass these over. The results of applying the indexes referred to are as follows:

	1938	Average 1934–1938
Lambert	$16,713,678	$16,172,748
Handy	18,345,198	16,969,308

We recognize that these mainland indexes are not specifically applicable to the utility property of the company. On the other hand, we also recognize the fact that these indexes give some indication in a general way of the probable trend of utility construction costs as they would be represented in a specific reproduction cost appraisal.

The company had previously made and submitted to the Commission a reproduction cost of its property as of December 31, 1936, based essentially on its historical cost, with the important difference, however, that overheads included in the historical cost at approximately 13 per cent were increased to approximately 19 per cent in the reproduction cost. If this reproduction cost is adjusted to reflect 13 per cent for overheads and subsequent additions and then trended to December 31, 1938, it falls about midway between the Lambert and Handy trended figures.

While these reproduction cost figures are admittedly broad approximations, they are probably as good as most reproduction cost estimates which may claim much more particularity. We believe that they give an indication of the general trend sufficient for the present purposes.

[2] There are many reasons why, in our judgment, the difference between investment and reproduction cost should not find its way into the rate base. Some we mention below without attempt to set forth all of the objections, or any of them in detail.

First there are difficulties of application. The figure will always be an estimate and the differences between estimates will be difficult to reconcile. The determination is both time-consuming and expensive. If reproduction cost should be appreciably lower, a fully lowered rate base would make it difficult to attract new capital as required. If reproduction cost becomes appreciably higher, it unduly favors the investor in equity securities causing him to command a disproportionately high rate of return. We know of no way to determine a fair return to

investors if their equity increases or decreases with a corresponding change in reproduction cost.

In the second place we do not believe it necessary to make the allowance to sustain the enterprise, that is, in order to hold investment in the enterprise and to attract new capital as required. We believe that the overall cost of capital would be reduced rather than increased, if the speculative element of a profit or loss with a change of price level were eliminated.

[3] The particular point of view taken of the property under review is worthy of mention in connection with a consideration of reproduction cost. We view the property throughout, not merely in cross section, but rather from the point of view of the economic life of the individual units that make up the whole. Later in viewing the depreciation of property, as for instance untreated poles, we have considered the remaining useful life in proportion to the total life, rather than computing obsolescence on a basis of the greater desirability of fully treated poles. This approach tends to call for the consideration of the longer period over which the property has actually been constructed, even from the point of view of reproduction cost. In view of the change in price levels since 1918 —up and down with respect to the 1923–1925 level—and our national objective of a stable price level, we believe that historical cost is to an extent a more reliable measure of a significant reproduction cost than "spot" reproduction cost estimates.

Persons who approach the matter from an academic and therefore disinterested angle almost universally approve the use of investment as against reproduction cost for the rate base. The state Commissions and other administrative bodies likewise lean toward investment. Representatives of the utilities are more frequently indicating a willingness to accept investment, sometimes with certain reservations as to the manner in which the investment is determined, as the base for the time being at least, as has the company in this instance.

[4] It is our belief however that the decisions of the United States Supreme Court still require that the matter of reproduction cost be considered and given proper weight. Our judgment as to the weight to be given this element has been influenced by considerations in part set forth above.

[5] After giving due consideration to the original cost of the property, the historical cost of the property and the evidence as to reproduction cost, and other factors set forth in Exhibit 1, it is our conclusion that an amount equivalent to historical cost of $15,830, 560 may fairly be taken to represent the value new of the physical property for rate-making purposes as of December 31, 1938. This amount is definitely higher than we would find if reproduction cost were not a consideration, and, if the law as enunciated by the courts in the matter or our interpretation thereof should be modified, a redetermination would be in order.

The adoption of the exact amount stated, rather than a rounded "judgment" figure, has many practical advantages. The historical cost has been computed in detail for all of the accounts, including the assignment of the cost of the surviving property in each account to the years of installa-

tion. That will make it a relatively simple matter to carry complete figures forward from year to year by adding to the individual accounts the cost of additions made, and deducting the historical cost of the property retired. The depreciation applicable to the property can be similarly carried forward from year to year.

We therefore find that a reasonable value new of the physical property of the Hawaiian Electric Company, Limited, used and useful in the rendering of utility service was $15,830,560 as of December 31, 1938. To this we have added $10,000 for cost of organization and $8,500 for cost of franchise, reaching a total value new of all property, tangible and intangible, of $15,849,060.

[6, 7] *Depreciation*—The cost new per books of utility property in service at December 31, 1938, was $14,960,307.15, against which there was a depreciation reserve of $6,184,795.04. The original cost as of the same date was $14,716,596.99 against which the applicable reserve was $5,941,084.88, or 40.37 per cent. Such a high percentage of reserve for an electric property which has been growing rapidly, and therefore has much relatively new property, is in itself an indication that the company has made excessive charges to operating expenses in the past for depreciation.

Reasons, paralleling to a large extent those for disallowing uncapitalized overheads, could be set forth to sustain the reasonableness of deducting the full amount of the reserve built up out of charges to operating expenses in the past. A concept of depreciation as a cost would also call for the deduction of the reserve.

However, we feel that the decision of the United States Supreme Court in Public Utility Comrs. v. New York Teleph. Co. 271 US 23, 70 L ed 808, PUR1926C, 740, 46 S Ct 363, will not permit the deduction of the full amount of the book reserve for depreciation. The amount we have deducted from value new to determine present value is the accrued depreciation determined in a manner consistent with the basis on which the annual charge for depreciation allowed as an operating expense is determined.

Leaving out of account the book reserve, § IX of Exhibit 1, gives a rather full discussion of both accrued depreciation, that is, the deduction to be made from value new in determining present value, and annual depreciation, that is, the charge to be included in operating expenses in a current year in determining the amount available for return on the rate base.

To us it seems axiomatic that the same principles should be applied in determining accrued and annual depreciation. The amount that has accrued up to any particular time is simply the cumulation of the amounts which have accrued year by year on the existing property.

[8, 9] Practically only two theories of depreciation are of any importance in the public utility field at the present time, viz., straight line and sinking fund (or compound interest). The straight-line method is one in which the service value of plant (that is, cost less net salvage) is spread over its life, as nearly as practicable, in equal annual amounts. The sinking-fund method is a procedure whereby an annuity is established, which, with compound interest at a certain stipulat-

ed rate, will equal the service value of the plant at its retirement. Under the sinking-fund method the depreciation charge in any year is not merely the annuity, or sinking-fund deposit, but also the interest on the reserve. The full depreciation charge under the sinking-fund method will, therefore, not be an equal amount in the several years as under the straight-line method, but will progressively increase during the life of the unit due to the compound interest feature. As a result the depreciation reserve will accumulate more rapidly under the straight-line than under the sinking-fund method, and at any particular age the straight-line reserve will be larger than the sinking-fund reserve.

No detailed discussion of the application of the two theories will be undertaken here. Suffice it to say that both theories provide for the recovery of the service value over the life of the property and that, if consistently applied with respect to both accrued and annual depreciation, there is for normal properties but little difference in the amount required at any particular time for depreciation and allowable return, combined. The following table shows the application of the two theories to the historical cost of the company's physical property at December 31, 1938:

	Straight Line	Five Per Cent Sinking Fund
Cost New	$15,830,560	$15,830,560
Accrued Depreciation	4,025,089	2,776,181
Cost Less Reserve	$11,805,471	$13,054,379
Six Per Cent Return	$708,328	$783,263
Annual Depreciation	483,584	380,662
Requirement for Depreciation and Return	$1,191,912	$1,163,925

Assuming for purposes of illustration a 6 per cent return, it will be seen that the combined requirement for depreciation and return under the straight-line method is some $30,000 greater as applied to the property as of December 31, 1938, than the similar requirement under the 5 per cent sinking-fund method. The application of the straight-line method would therefore give a rate reduction in this case of $30,000 less than the sinking-fund method adopted herein even though the rate base would, under that theory, be approximately $1,150,000 lower than under the sinking-fund theory. The difference arises through the fact that the annual depreciation on a straight-line basis is approximately *$103,000 more,* whereas the return at 6 per cent is only *$75,000 less* than that required on the sinking-fund rate base.

The company has expressed a preference for the use of the 5 per cent sinking-fund method of depreciation and since no inequity apparently results therefrom, we are not disposed to disagree. However, since this marks a change from the previous practices of the company which were based on the straight-line theory, and since they have in the past set up ample depreciation to take care of all depreciation which has accrued to date on existing property plus all early retirements made in the past, the deduction for accrued depreciation should be the reserve applicable to the property in service as of December 31, 1938, based on the age of the existing property in relation to the anticipated life of that property.

This matter is discussed on page 174 of Exhibit 1 and the computation of the reserve on that basis is made in

Table 38 on pages 107–199. The 5 per cent sinking-fund reserve applicable to property in service at December 31, 1938, is shown to be $2,776,-181. We find this amount to be the accrued depreciation to be deducted from the reasonable value new of the physical property found to be $15,-830,560 as of December 31, 1938.

[10–13] Section VIII—*Contributions*—included in the property of the company is certain property which has been paid for, in whole or in part, by advances or contributions from consumers and, therefore, represents no investment on the part of the company. These advances or contributions are usually required to be made when a customer either wants some special kind of service connection (for example, underground instead of the usual overhead service) or when he is located some distance from the company's existing lines. The amounts so paid by consumers, if subject to possible refund, are carried in Account 241—"Customers' Advances for Construction," and, if not subject to refund, they are carried in Account 265—"Contributions in Aid of Construction." When the period during which a refund may have to be made on any particular advance has expired, the remaining balance, being no longer subject to refund, is transferred to Account 265. Under the prescribed System of Accounts no transfers may be made out of this account except with the approval of the Commission.

As of December 31, 1938, Account 241 showed a balance of $35,797.41 and Account 265 a balance of $116,-238.81. Total contributions from 1919, when records were first kept, to December 31, 1938, were $372,225.-40. Prior to January 1, 1938, when the new system of accounts was prescribed, the company had followed the practice of amortizing such contributions in ten equal annual instalments to nonoperating income. This practice does not seem to us to be in accordance with good rate-making procedure, and for the purpose of fixing rates at this time we will disregard the company's past practice and approach the problem anew.

Exhibit 1 suggests several alternative methods of handling this item in the determination of rates. We believe the third method is a proper basis. This is set forth at pages 148, 149 as follows:

"(3) Still a different assumption, and probably the most logical one, is that the money contributed by customers is used toward paying for the construction of a portion of the property used to serve them. To that extent the company has no investment in the property, although it has the legal title thereto. Since the contributions are nonrefundable, the using up of the property in service does not represent the using up of any investment of the company for which it would be entitled to reimbursement through depreciation charges made to operating expenses. The consumption of this property represents rather the using up of the contributions made in advance, for which no reimbursement is made to anyone. If the property constructed out of contributions could be segregated, it should logically be charged to the contributions account when retired, instead of to depreciation reserve. If that were done, of course there should be no depreciation charged against such property while in

service. However, it would be very burdensome to attempt to keep accurate records of all property constructed out of contributions; in fact it would, in many cases, not be possible because the contributions sometimes represent merely a portion of the cost of specific property (e. g., when a customer pays the difference between the cost of an overhead and an underground service into his home). Substantially the same results can be achieved, however, by very much simpler methods, such as the following:

"Charge all new construction to the appropriate property account without reference to the source of the funds. Compute annual depreciation in the first instance against all property in service including contributed property. To offset the depreciation computed against contributed property, the amount of each year's contributions credited in that year to the contributions account should be amortized from that account to depreciation reserve over a period approximately equivalent to the estimated service life of the property constructed out of contributions. Whether this is done on a straight-line, sinking-fund, or other reasonable basis is immaterial. The total amount of the amortization in each calendar year would be deducted from the computed amount on annual depreciation for that year, the balance being the charge to operating expenses for depreciation. All retirements of property would then be charged to depreciation reserve." [1]

In the case before us, in order to make possible a new determination as of December 31, 1938, a study was made of the total property constructed out of contributions amounting to $372,225.40. It was found that some $36,516 had been retired to December 31, 1938, leaving $335,709.40 in service. It was estimated that this property had an average service life of twenty-three years, requiring an annual depreciation rate, under the 5 per cent sinking-fund theory which we have approved as reasonable for this property, of 2.414 per cent. Applying this amortization rate with compound interest to the cost of contributed property according to the years of installation, $74,352.99 would have been amortized to depreciation reserve under the method outlined above up to December 31, 1938, leaving an unamortized amount of $261,356.41. In effect this means that the accrued depreciation of $2,776,181 as determined above included $74,352.99 applicable to contributed property. The net deduction to be made on account of contributions is therefore $261,356.41. Of course the unrefunded balance of customers' advances (Account 241) should also be deducted in full.

Summarizing up to this point we get the following rate base as of December 31, 1938, before any allowance for working capital.

[1] "The same mathematical result would be arrived at if the amount of amortization of contributions were credited to operating revenues instead of depreciation reserve and the full amount of computed depreciation were allowed as an operating expense. Both revenues and operating expenses would be increased by the amount of the amortization, and operating income would be the same. It is believed, however, that credit to depreciation reserve represents the better accounting procedure."

	Value New	Accrued Depreciation	Present Value
Physical Property	$15,830,560	$2,776,181	$13,054,379
Add: Organization and Franchise	18,500	.....	18,500
	$15,849,060	$2,776,181	$13,072,879
Deduct: Customers' Advances	35,797	.....	35,797
	$15,813,263	$2,776,181	$13,037,082
Deduct: Contributions in Aid of Construction	335,709	74,353	261,356
	$15,477,554	$2,701,828	$12,775,726

Gross additions for the year 1939 are estimated at $1,148,555. Credits to depreciation reserve for the year under the 5 per cent sinking-fund theory adopted by us as reasonable for this property will be $392,484, leaving a net increase in property less depreciation of $756,071. Averaging the cost less depreciation for December 31, 1938, and December 31, 1939, gives an average for the year 1939 of $13,153,762. All of the above figures are set forth in Table 58 on page 266 of Exhibit 1.

[14–16] Section X—*Working Capital*—The amount of working capital to which a utility is entitled as a part of the rate base is in our opinion, an amount representing the extent to which the investors' money is tied up in operating expenses and in materials and supplies required for operation, plus necessary prepayments and working funds including a reasonable amount to be maintained as a bank balance. Section X of Exhibit 1 gives detailed computations of these figures for the company for the year 1939. For the regular operations of the company (that is, excluding retail merchandise sales) Exhibit 1 shows that the revenues are collected by the company in advance of the time when disbursement must be made, so that the investors do not have at any time any actual investment in operating expenses. At certain times of the year the excess of cumulative revenues over cumulative disbursements runs down to a minimum of approximately $5,000 and at other times to a maximum of approximately $220,000. The minimum of $5,000 is considered too low, and we will therefore include in our allowance for working capital an item of $100,000 for additional bank balances. That would, under current conditions, if the proportional part of revenues were reserved for payment of operating expenses, give the company a bank balance ranging from a minimum of $105,000 to a maximum of $320,000. This is considered liberal, inasmuch as the company will be allowed earnings on money used for other purposes, as for instance for construction, to the extent that the actual cash on hand is less than the theoretical bank balance. The average amount of cash held by the company for *all* purposes (not merely for utility operations) was $95,367 during the year 1938 and $146,519 for the first eight months of 1939. The average of materials and supplies for regular operation for the year 1939 is estimated at $350,000.

We will treat the merchandise operations of the company as a part of its utility business and will therefore allow working capital for this department also. A large part of the retail

appliances are sold on instalments. Since little or no profit is shown, the average amount of money tied up in such sales is most conveniently arrived at merely by taking the average of the outstanding instalment contracts. This is estimated at approximately $250,000, to which should be added some $10,000 of open retail merchandise accounts, making a total cash requirement of $260,000. The investment in a reasonable stock of appliances being held for sale is about $20,000.

Total working capital requirements for the year 1939 are therefore as follows:

For regular operation:	
Materials and Supplies	$350,000
Cash	100,000
For Merchandising:	
Stock on hand	20,000
Cash	260,000
Total	$730,000

We find an allowance of $730,000 for working capital including materials and supplies to be reasonable for the year 1939.

The rate base as thus determined for the year 1939 is as follows:

Fixed Property (p. 173 above)	$13,153,762
Working Capital (above)	730,000
Rate Base	$13,883,762

which amount we find to be a reasonable value for the property of the Hawaiian Electric Company, Limited, used and useful in the rendering of electric service for the year 1939.

[17] In finding fair value for ratemaking purposes we have taken into consideration and made full allowance for the fact that the property is a going concern with customers attached and in successful operation and earning a return. The plant without business, present or prospective, would obviously be worth much less than the cost figures which we have found to represent value. Denver Union Stock Yard Co. v. United States (1938) 304 US 470, 82 L ed 1469, 24 PUR (NS) 155, 162, 58 S Ct 990.

We further find that this rate base, if carried forward from year to year by adding thereto the cost of additions to utility property as made from time to time less the historical cost of retirements plus or minus the net change in the depreciation reserve computed as herein set forth, with such changes in the working capital allowance as may, under the principles herein stated, be required, will provide an adequate basis for fixing rates in the future until such time as a complete restudy of the matter may be required.

[18] *Annual Depreciation*—One of the important items in almost every rate proceeding is the amount to be allowed as an operating expense for annual depreciation in determining the earnings of the utility company. We have already referred to the matter of depreciation in our discussion of the rate base. Here again the two principal theories which are of importance are the straight-line and sinking-fund, or compound interest, theories. As stated above the theory applied in determining the annual charge to be allowed should be consistent with the manner in which the deduction from the rate base on account of accrued depreciation is determined.

The estimated lives for the various classes of property used in the computations in Exhibit 1 are considerably longer than those heretofore estimated by the company. Columns D and F

of Table 31 in Exhibit 1 give the straight-line percentages now being used per books and the straight-line percentages corresponding to the longer lives estimated for the purpose of this proceeding and for depreciation accruals for the immediate future. The extent of the change can be readily seen. The composite rate for the depreciable property as a whole before revision was 4.916 per cent, corresponding to an average estimated life of approximately twenty years. The composite rate after revision is 3.420 per cent, corresponding to an average life of approximately twenty-nine years, or an increase in estimated life of some 45 per cent. While the increased lives are apparently still somewhat shorter than those corresponding to depreciation charges made by electric utilities generally, we accept them as reasonable for the purposes of this proceeding in the light of available information at this time.

[19, 20] The total amount of annual depreciation expense for the property as a whole based on these lives is $516,992 on a straight-line basis and $412,047 on a 5 per cent sinking-fund basis. However, these amounts are not chargeable in full as depreciation expense. In the first place the company, in common with many other companies, charges the depreciation on vehicles and certain other equipment to clearing accounts, so that the amount of depreciation on these accounts is included among other operating expenses. In the second place, the depreciation computed against property constructed out of contributions should not be charged to consumers as an operating expense, but should be provided by a charge to Account 265—"Contributions in Aid of Construction." The net depreciation charge to operating expense is therefore computed as follows:

	Straight Line	5% Sinking Fund
Annuity	$516,992	$273,238
Interest on Reserve	.....	138,809
	$516,992	$412,047
Charged to Clearing Accounts	18,811	19,563
	$498,181	$392,484
Provided out of Contributions	14,597	11,822
Net Depreciation Charged to Operating Expenses	$483,584	$380,662

Since the rate base was determined on the basis of accrued depreciation computed on the 5 per cent sinking-fund basis, the annual depreciation allowance will be made on the same basis, and we find that a charge of $380,662 is reasonable for the year 1939.

[21] We further find that rates of depreciation based on the lives and salvage estimated for the property in the several accounts, as set forth in Columns F and H of Table 33 on pages 186–188 of Exhibit 1, should be charged on the historical cost of existing utility property and the cost of additions until such time as a change may be ordered or authorized by this Commission. We further find that, if and when the company is of the opinion that the application of these rates no longer equals the actually accruing depreciation on the property, it should duly make application to the Commission for such changes as it deems necessary and be prepared to support the same by proof.

[22, 23] *Rate Case Expense*—There is one additional item to which

consideration must be given, viz., the expenditures of the company in connection with the present proceeding. These have not been finally determined, but it is known that the amount will be approximately $140,000. It is customary to permit amortization of such costs as an operating expense over a period of years in the future. The recent decision of the United States Supreme Court in the Driscoll Case, Driscoll v. Edison Light & P. Co. (1939) 307 US 104, 83 L ed 1134, 28 PUR(NS) 65, 75, 59 S Ct 715, seems to require that such amortization be allowed even when the expenses are incurred in resisting a reduction which is later shown to be justified. In our opinion ten years is a reasonable period for the amortization of these expenses. We will, therefore, allow the rate case expense, estimated to be approximately $140,000, to be amortized with interest at 6 per cent in equal annual instalments over the 10-year period 1940–1949. This annual amortization, amounting to 13.59 per cent of the total as finally determined, will be an allowable expense in the determination of income for the fixing of rates.

[24] *Rate of Return*—We would ordinarily show here a finding of a fair rate of return. We would then determine rates which over the forthcoming period would yield this return on the rate base for the period. It has been contended by the company, which fact does not appear in the record, that the outbreak of the European War makes any present determination of fair rate of return or of anticipated expense and revenue for a forthcoming period impractical. While not agreeing that it would be impractical to make such determination, we recognize the additional uncertainty of estimates for the future that has been brought about by the War. In lieu of this regular procedure, a substitute procedure for the determination of rates has been worked out which has the approval of the company. There is, therefore, included herein no finding as to a fair rate of return.

Determination of Rates and a Fair Return—Accurate estimates of expense and revenue for the calendar year 1939 were possible. We have determined rates, as set forth below, which would have returned 6¼ per cent on the average of the rate bases for the beginning and end of the year 1939, determined as set forth above, and we find that these rates for the forthcoming period will constitute just and reasonable rates and yield not less than a fair return upon the property for 1940.

We would anticipate that approximately a year from now the same procedure would result in a similar computation for rates for 1941, and that a workable plan whereby rate changes can be made almost automatically as conditions indicate that changes are in order, will develop.

We regard this procedure as an experiment with possibilities of development. If occasion should arise, the rate of return selected (corresponding to the 6¼ per cent applied to the 1939 rate base) would be modified. We anticipate that continued expansion and economies will cause the actual return realized to be greater than 6¼ per cent on the applicable rate base for the year, and believe that such earnings over and above the stated return will constitute an incentive to management to develop

new business and effect economies. We believe that the substitute procedure, with possible modifications, has definite possibilities of advantage over the conventional plan for both the consumers and the company. Should experience cause either the company or us to feel otherwise, resort would be had to the more customary procedure.

Rates—The rates determined as above are attached to the order as Exhibit A, and we find that these rates should be placed in effect by the company for all meter readings taken on and after January 1, 1940.

The principal changes in the new rates as compared with the old rates, and the estimated reductions resulting therefrom on the basis of 1939 consumption, are as follows: [Schedules omitted.]

ORDER No. 327

Pursuant to and based upon the decision heretofore rendered herein by the Commission,

Now, therefore, it is hereby *ordered:*

I

That the rate base as of December 31, 1938, is $13,505,726, arrived at as follows:

Physical Property, Organization and Franchises (undepreciated)	$15,849,060
Deduct: Accrued Depreciation ...	2,776,181
	$13,072,879
Deduct: Contributions	297,153
	$12,775,726
Add: Working Capital	730,000
Rate Base	$13,505,726

Summary of Reductions

Schedule	Class of Service	Estimated Percentage of Reduction	Estimated Amount of Reduction
AC	Residential	9.99%	$163,728
A	Small Commercial Lighting	9.21	48,537
B	Large Commercial Lighting	9.63	31,623
C	Commercial Cooking, Heating and Refrigeration	9.56	11,271
D	Power	4.09	14,644
P-3	Power with Incidental Lighting	6.87	12,310
	Total		$282,113

This decision is being entered at this time as the tentative decision of the Commission, and a period of fourteen days from the date hereof will be allowed in which interested parties may file exceptions or request a reopening of the case. If no request for reopening is received within the stipulated time, this decision will automatically become the final decision of the Commission. Thereupon a final order in conformity therewith will issue. [Final order entered March 19, 1940.]

That the rate base of $13,505,726 shall be subject to change during subsequent years dependent upon capital expenditures for the acquisition of new properties, disposition of property assets, retirals, abandonments, depreciation accruals, and changes in working capital allowance.

II

That the depreciation expense for the year 1939, computed on a 5 per cent sinking-fund basis, is as follows:

Annuity		$273,238
Interest on Reserve		138,809
		$412,047
Charge to Clearing Accounts		19,563
		$392,484
Charge to Contributions Account		11,822
Net Depreciation Charge to Operating Expenses		$380,662

That the depreciation charges for the year 1940 and succeeding years shall be computed in the same manner according to the rates of depreciation set forth in Column J of Table 33 of Exhibit 1, which table is by reference incorporated herein as fully and as completely as though it were set forth herein in haec verba, until such time as a change shall be made or authorized by this Commission, after affording the company a hearing thereon; and that if and when the company is of the opinion that the application of these rates no longer equals the actually accruing depreciation, it shall make application to the Commission for such changes as it deems necessary, which if required shall at a hearing thereon be supported by proof.

III

That the company shall continue in effect the rates heretofore put into effect under Commission's Order No. 323 (interlocutory order) dated December 29, 1939, which rates are more particularly set forth in Exhibit "A," attached hereto and made a part hereof.

NEW HAMPSHIRE PUBLIC SERVICE COMMISSION

Re Concord Electric Company

[D-1971, Order No. 3732.]

Rates, § 302 — Sliding-scale plan — Electric utility — Discontinuance of proceeding.

Discontinuance and dismissal of an electric rate investigation was held to be in the public interest in view of undertakings by the company for the next five years with respect to immediate rate reductions, without any finding as to rate base or fair rate of return, and a plan for automatic rate revision, warranted by conditions, with a division between the company and the ratepayers of savings due to improved operation and greater efficiency—a basic lump sum return, adjusted for changes in net fixed capital, being regarded as a minimum.

[March 19, 1940.]

INVESTIGATION *of electric rates; dismissed in view of undertaking of company for subsequent 5-year period.*

APPEARANCES: Carl C. Jones and Franklin Hollis, for the Concord Electric Company; Thomas P. Cheney, Attorney General, and Frank R. Kenison, Assistant Attorney General, for the state of New Hampshire; Robert

C. Murchie, pro se, and for certain other stockholders.

SMITH, Chairman: Following prolonged but unsuccessful attempts to negotiate satisfactory revisions of the tariff of the Concord Electric Company, hereinafter termed the company, this Commission on March 1, 1939, asked to be advised in writing by March 15th whether the company would agree to make effective not later than May 1st rate reductions amounting to at least $75,000 annually. The company having refused by letter dated March 14th, the Commission of its own motion issued on March 16th an order of investigation into the rates, service, and practices of the company and assigned the matter for hearing beginning April 11th, Re Concord Electric Co. 21 NHPSC 101. On April 1st the company filed a so-called petition for rehearing, which was denied by order of the Commission dated April 3rd, Re Concord Electric Co. 21 NHPSC 118. Subsequently an appeal to the supreme court was filed. This has not been argued, however, and the Commission has proceeded with the investigation through a long series of hearings continuing intermittently from April 11, 1939, to date. The record of these hearings now consists of more than 3,000 pages of testimony and nearly 100 exhibits.

Service

During the early stages of the proceeding members of the Commission's engineering staff questioned the adequacy of the service furnished by the company in certain respects, calling attention particularly to occasional failures in some sections of the city and to abnormal variations of voltage in outlying areas. Later testimony offered by witnesses for the company indicated that the outages referred to had been occasioned in part by the nature of temporary repairs made after the gale of September, 1938, and described plans for the strengthening of lines and improvement of facilities to prevent the recurrence of such failures of service in the future. The maintenance of service since that time, including the period of normally heavy loading over the Christmas season 1939, indicates that these measures have been effective.

Similarly, witnesses for the company presented plans looking to the improvement of voltage, but pointed out that a considerable period of time would be required for the complete study and efficient correction of this situation. Improvement has been effected in some areas by the installation of voltage regulators, and progress has been made in consultation between representatives of the company and of the Commission relative to the desirability of further changes.

The Commission is satisfied that the company is making reasonable efforts to maintain satisfactory continuity of service and regularity of voltage within proper limits. Accordingly it is prepared to dismiss the investigation in so far as service is concerned. Disregard of proper standards will not be tolerated, however. On the contrary, improvement should continue and the Commission will expect to be consulted with reference to plans to promote this result.

Practices

Tariffs

Early in the investigation it was shown that the company was rendering certain services, and collecting charges therefor, not covered either by its filed rate schedules of general application or by special contracts approved by order of this Commission. It appeared that these arrangements—including sales of auxiliary power to St. Paul's School, a number of private street lights, public street lighting in the towns of Boscawen, Bow, Canterbury, and Salisbury, and electricity furnished for various fire, police, and traffic signal lights in the city of Concord—were for the most part of long standing, having grown out of informal negotiations between the company and its customers. While the Commission had general knowledge concerning most of these arrangements, they were not filed in accordance with the requirements of law as interpreted by the Commission.

The company agreed to meet this situation and its representatives conferred informally with the Commission concerning this and other features of its tariff during July, 1939. The result, a complete revision of the tariff as to scope and form without substantial change of rate levels, was filed as Concord Electric Company Tariff NHPSC No. 2 on July 29th, to become effective September 1, 1939. This new tariff, complying in all respects with the Commission's requirements as to form, corrected most of the improprieties referred to just above. The service to St. Paul's School is provided for specifically under Rate Schedule OG. Definite terms of general application for street lighting service, both to individuals and to public agencies other than the city of Concord—which is served under a special contract approved by Order No. 3223 of this Commission—are established on a uniform basis under Rate Schedule S. This schedule also includes specific provisions as to hours of operation, outage credits and adjustments, and extensions to existing street lighting circuits.

Only the miscellaneous signal lights in the city of Concord, for which total charges in 1939 were less than $1,000, remain outside the regularly filed rates and approved contracts. Because of uncertainty as to the street lighting situation in the city, the company desires additional time to work out a satisfactory solution in the case of these minor items and has agreed to do so within the next six months. On the understanding that this will be done, the Commission accepts the progress made as satisfying the requirements as to tariff filings and contract approvals.

Rate Application

Other practices of the company considered during the investigation concerned principally the application of its rates for billing purposes. In this connection engineers for the Commission testified that the company maintains reasonable standards of accuracy in the case of its watt-hour meters. They were not equally satisfied with certain of the attachments used to register customers' demands under rates in which that element was measured for use in the determination of charges. Representatives of the company stated its intention of replacing

the older and less satisfactory types of demand attachments and described newly established routines for checking their accuracy. It is believed that substantial improvement has been effected in these respects.

The filed tariff permitted the company to estimate customers' loads where measurement was not provided for, with the result that controversies developed as to the accuracy of the basis used for billing. Members of the Commission's staff proposed for consideration various means of improving this situation. Among these was the incorporation in the tariff of provisions similar to those adopted by other New Hampshire electric utilities setting definite limits beyond which demands must be measured and including specific formulae to be applied when active load estimates are employed below these limits. The company, while indicating a willingness to meet substantially the views of the Commission in this respect, advanced reasons why it did not regard any of the formulae suggested as insuring fairness of treatment among its customers.

This matter was considered fully during the July conference referred to above, and the revised tariff filed thereafter contains Rule 18, which establishes definitely uniform methods whereby demand or active load will be determined for billing purposes. Without undertaking to set forth these provisions in detail, it is sufficient to point out that specific limits as to demand and consumption are established under the several rates beyond which all demands will be measured. In the cases of the smaller loads, which will continue to be estimated, procedures have been agreed to by the company giving, in our opinion, much greater assurance than heretofore that the estimates under the general and power service rates will be reasonably accurate and subject to periodic check. We are not entirely satisfied with the provisions governing the excess demand charge under the rates for domestic service, but have been assured that the company will give further consideration to this phase of the matter.

In consideration of the substantial improvements thus far made, which have corrected virtually all of the practices objected to, and the commitments made by the company respecting prompt attention to the two remaining matters—the excess demand charge under the domestic rate and the miscellaneous signal lights in the city of Concord— the Commission is willing at this time to discontinue the investigation in so far as it relates to the practices of the company.

Rates

Financial Showing

Early in the proceedings the Commission's accountant offered in evidence tabular exhibits based on the annual reports of the company to the Commission for the fifteen years prior to this investigation. These tables showed that, while the company's investment in operating property, hereinafter referred to as fixed capital, had increased from $1,338,332 to $2,180,543 from January 1, 1924, through December 31, 1938, the company's depreciation reserve had grown during the same period from $158,573 to $680,770, and its surplus from $88,-

390 to $424,554. These exhibits showed also that, while the 6 per cent preferred stock had remained at $225,000 par, the company's bonds totaling $285,000 had been retired. During all this period the common stock, which increased from $600,000 to $1,100,010, received annual dividends of at least 9 per cent on its paid-in value, with a high of 14 per cent for a number of years. During the same 15-year period the company's net electric operating income ranged from a low of 6.2 per cent on gross fixed capital, and slightly over 9 per cent on gross fixed capital less depreciation reserve, hereinafter referred to as net fixed capital, in 1936, to a high of slightly over 10 per cent on gross and nearly 13 per cent on net fixed capital in 1928.

Our action in initiating this proceeding, as outlined above, was hastened by consideration of the company's operating results for 1938, when a net electric operating income of $157,548 was reported after deduction of the unusual expenses occasioned by the flood and hurricane of September, 1938. Adjusting this figure for 1938 net earnings, because of the nonrecurring nature of these expenses, the net return becomes $174,473, or 8 per cent on gross and over 11.6 per cent on net fixed capital. This record led the Commission to believe that the company might make an immediate reduction in rates amounting to $75,000 annually without in any way jeopardizing its financial standing or its ability to render adequate and proper service to the public. On this basis net electric operating income would be reduced to approximately $100,000 per year.

Proposed Rate Reductions

A number of so-called trial rates were introduced by the Commission's rate engineer for consideration in revising the rate structure of the company. The revenue yields under six possible rates for domestic service, five for general service, one for Power service, and two for street Lighting in the city of Concord were calculated on the basis of 1938 consumption. Applying what appeared to be a desirable combination of these trial rates, together with other operating revenues, to the income account for 1938, adjusted as described above, the Commission's accountant testified to a probable net income of slightly less than $103,000 annually. With this showing, offered on June 29, 1939, the Commission was prepared to conclude its evidence.

Continuation of the Proceeding

After consideration by counsel, the company asked for an opportunity to present further testimony in defense of the existing rates, particularly with reference to the reproduction cost of the property and other elements which might be pertinent to fair value for rate-making purposes. This was granted, and the hearings were suspended until November to permit adequate preparation. In the interim the Commission, with the coöperation of the governor and council, retained as consultant Earl L. Carter of Indianapolis to make similar studies. To conserve both time and expense it was arranged that the engineers representing the company—the firm of Maurice R. Scharff of New York—confer with those retained by the Commission in

an effort to reduce points of controversy to the minimum consistent with independent determinations and judgments. This method of procedure resulted in substantial agreement between the engineers on purely factual matters, such as units and quantities of the various items of physical property, utilizing the continuing property records maintained by the Commission and by the company under our requirement.

Although the presentation of evidence has not been completed and the Commission therefore refrains specifically from any finding at this time as to value for rate-making purposes, the testimony thus far offered and other information now available indicate the existence of substantial differences of opinion as to the fair value of the property. Thus, the net book value of the property plus working capital was approximately $1,600,000 as of the end of 1938; at the other extreme, the company appears prepared to claim a corresponding present value as high as $3,250,000. The estimates of reproduction cost new less depreciation plus working capital prepared by the engineers for the Commission and for the company would amount to roughly $1,900,000 and $2,300,000, respectively.

On January 15, 1940, during the course of testimony as to value, counsel for the company suggested that it might be possible to effect settlement of the remaining issues through conference. The Commission at once indicated its readiness to coöperate in such an effort, with the result that a number of conferences, in which the attorney general has participated, have been held. These conferences have had as their purpose an attempt to devise coöperatively a plan of rate reductions fair to all concerned, thus avoiding the further delay and cost involved in continued formal proceedings and litigation.

After full and careful consideration of the issues and facts developed during the course of these extended conferences, a proposal was formulated for presentation at the hearing on March 19, 1940.

Proposal of Dismissal

Briefly, the company's proposal, which has been incorporated in its entirety in the record of this proceeding, provides for the dismissal of this investigation upon the basis of certain undertakings of the company for a period of five years from April 1, 1940. One is the filing of rates, effective as of April 1st, resulting in reductions of approximately $30,000 annually. Tariff changes have been designed to produce this result and to meet the Commission's view that the price of energy in the first block of the domestic service rate should be cut drastically and that the level of charges for intermediate loads and consumption under the general service rate should be lowered. Under such disposition of the rate question there would be no finding, expressly or by implication, of either a rate base or a fair rate of return by the Commission at this time. It would, of course, be understood that any action now taken by the Commission based on the proposal would be wholly without prejudice as to its consideration of any rate complaints which might hereafter be brought by any interested party. In addition, the appeal filed by

the company in the supreme court referred to earlier in this report would be withdrawn.

For the balance of the 5-year period the proposal includes a plan whereby rate revisions warranted by conditions would be made automatically on April 1st of each year without uncertainty, expense, or delay. In effect this plan recognizes that under present conditions the company may be entitled to a minimum net return of about $115,000, but that testimony thus far introduced and studies made or in progress indicate that it has an opportunity to effect in the future substantial economies through changes in plant and operating methods. It recognizes, further, that the public is entitled to expect a reasonable degree of managerial and operating efficiency and a reduction of charges as operating costs are lowered. On the other hand, it recognizes that detailed supervision and control of operations by public authority are not feasible, but that under conditions of regulated monopoly there may be but little incentive to increased efficiency if the entire amounts of all such savings are translated immediately into reductions of rates and net earnings.

For these reasons the proposal provides a definite plan which is essentially a division between the company and the ratepayers of savings due to improved operation and greater efficiency. Basing all financial calculations on the calendar year, the plan calls for rate revisions worked out in coöperation with the Commission to become effective as of the following April 1st. After the first year the basic return of $115,000 annually, adjusted for changes in net fixed capital as described below, would be regarded as a minimum; failure of net electric operating income to reach this level would entitle the company, if it so desired, to attempt to secure larger earnings by establishing higher rates without objection on motion of the Commission. On the other hand, should net electric operating income for any calendar year exceed $125,000, similarly adjusted for changes in net fixed capital, rates would have to be reduced by the amount of such excess, except that the company's upper limit of earnings would be increased by 50 per cent of the calculated amount of rate reductions made after the initial reduction of April 1, 1940, provided for in the proposal. Thus, for each dollar of rate reduction actually made effective, the maximum earnings permitted to the company without obligation of further rate reduction would be raised by 50 cents. At the end of each calendar year, however, both the basic minimum of $115,000 and the basic maximum of $125,000 would be increased or decreased by 6 per cent of the increase or decrease in net fixed capital since January 1, 1940.

In determining at the end of each calendar year the amount of the rate revision required as of the following April 1st, the proposal provides that operating revenues as affected by the yield of any new rates shall be calculated on the basis of actual consumption during that calendar year and that revenue deductions (operation and maintenance expenses, depreciation, taxes, amortization, and the like) shall be actual charges for the same period, except as qualified by the adjustments next described.

In the computation of the net elec-

tric operating income for the past calendar year, which is to be used as the basis of determining the amount of rate reduction to be made as of the following April 1st, it is recognized in the proposal that certain adjustments should be made in order to equalize the effect of large expense items which might fluctuate widely and beyond the control of the company. Otherwise, either the public or the company would be penalized on account of abnormal conditions. The most important such item appears likely to be is the cost of purchased power.

With the present generating facilities at Sewall's Falls, the company's out-put of current is limited. It is especially sensitive to the rate of flow of the Merrimack river, there being no storage facilities to maintain even flow in dry periods or in times of flood when, due to the design of the plant, the generation is actually cut down, by loss of head. Consequently the supply of power from company sources has varied in the past eight years from a high of almost 14,000,000 kilowatt hours to a low of slightly over 11,000,000 kilowatt hours, and the volume of the purchases of power varies inversely with this production. At the same time, the growth of sales of current works to continually increase the amount of available power needed, and hence the volume and total cost of purchased power. The seriousness of the effect of this situation upon the cost of purchased power is illustrated by the actual costs of this item during the past three years, namely $91,280 in 1937, $80,625 in 1938, and $103,410 in 1939. Consequently an adjustment of this item designed to equalize the effect of the water conditions is proposed for the purposes of the rate reduction calculations. Briefly stated, the number of kilowatt hours purchased in each of the four years preceding the year in question is to be divided into the number purchased in that year; then the actual cost of the purchased power in each of the preceding four years is to be multiplied by the quotient of each of the divisions respectively; then an average of the adjusted cost for the four years plus the actual cost for the year in question will be taken as the adjusted purchase power cost for the year in question.

The company proposes to pay the expenses incurred by the Commission outside its own organization in connection with this investigation, amounting to $9,832.37. In 1939 and 1940, it has itself incurred similar expenses totaling approximately $58,360. Inclusion of these large amounts in the operating expense calculations for 1939 and 1940 would obviously result in low net operating incomes, to the detriment of early rate reductions, so it is proposed to amortize these amounts over the period 1939 to 1944, inclusive, by annual charges into expense accounts of approximately $12,225 (except that for 1939 the charge is to be $7,060). Since certain credits have already been taken in the Federal income tax computations for 1939, and others will be taken in 1940 on account of these expenditures, the tax savings realized thereby will be reflected in the expense calculations by annual credits of approximately $2,184 over the same period of years as the charges referred to.

The company also proposes to limit expense charges in any one year on

account of unusual causes not within its control, such as hurricanes, floods, and the like, to 5 per cent of the adjusted net electric operating income for the year by suitable amortization of such amounts. This likewise will protect both the public and the company against penalization due to abnormal conditions.

Since redevelopment of the Sewall's Falls plant, a project which has been recommended by engineers to both the company and the Commission, would materially affect the volume and cost of power purchases, it is proposed in that event to mutually reconsider the method of adjustment of the purchased power cost used in the net electric operating income calculations.

Similar treatment is proposed should the provisions of the purchase power contract with the Public Service Company of New Hampshire be revised during the 5-year period.

Changes in Conditions, 1938-1940

Since the opening of this investigation certain changes have occurred in the conditions underlying our original demand for rate reductions totaling $75,000 annually. One of these changes is that there have been net additions to fixed capital during 1939 amounting to approximately $58,000.

More important is the increase in operating expenses due principally to increased purchased power costs because of the abnormally low water conditions experienced on the Merrimack river since July, a factor which operates, as described hereinbefore, to directly and materially increase expenditures for power purchases. It does not appear that the company has ever experienced such poor water conditions as it has had from early July, 1939, up to the present time, resulting in 1939 in the highest cost of purchased power in the history of the company by nearly $12,000, and almost $23,000 more than the amount included in the 1938 operating figures, upon which the Commission had relied in figuring probable 1939 net earnings.

Members of our staff have studied extensively into the probable effect of this bad water condition on the volume of purchases likely to be necessary in 1940, and, after allowances for the increased volume of power needed as a result of a normal increase in sales, they have estimated 1940 power purchases at nearly two million kilowatt hours more than were needed in 1939, and four million more than in 1938. This emphasizes the desirability of providing for the adjustment of the purchased power cost item as used in computing the net electric operating income for the purpose of determining the amount of rate reductions to be made in the future—an adjustment which under these circumstances operates to the benefit of the ratepayer.

Another changed condition to which some attention must be paid is the probability of an increase in the property tax rate in the city of Concord for 1940. An increase of several thousand dollars in the company's tax bill appears not unlikely, with a corresponding reduction of net operating income.

Forecasting the effect of the proposed rate cuts, aggregating approximately $30,000 annually, upon the net electric operating income for the calendar year 1940 is complicated by the

fact that they will be in effect only nine months of the year, including the months of lower per capita consumption, and because the extent of increased consumption due to rate reductions is difficult to predict with accuracy. The indications are that under the company's proposal its net electric operating income for the year 1940 may well fall below $115,000.

The foregoing are all factors which the Commission must of necessity take into account in a proceeding of this character and in any findings or orders which it might issue fixing the rates for the future.

Reasons for Discontinuance

Discontinuance of the investigation by the Commission at this time on the basis of the plan outlined above will have certain obvious advantages to the public. Additional expenditures for engineering and legal services will be avoided and substantial rate reductions will become effective without further delay.

Since the issuance of our order instituting this proceeding the company has made reductions of its rates totaling on an annual basis approximately $31,200. Of this amount, $27,700 resulted from the establishment of the present general service rate, which became effective April 1, 1939, $500 from minor changes in the rates for this type of service, both annual and seasonal as of June 1st, and a maximum of $3,000 from the extension of the discount features of the rate for power service provided for at the time of the general tariff revision which became effective September 1st, as explained earlier in this report. With the addition of the roughly $30,000 of reductions to become effective April 1, 1940, the total annual saving to ratepayers will amount to approximately $61,000. While this is $14,000 less than the Commission asked for a year ago, it should be borne in mind that operating costs, as explained above, have increased by far more than this difference. Purchased power cost alone for 1939 was $22,800 more than in 1938, while in 1940 a further increase of $23,000 appears not unlikely.

The rates designed to effect the $30,000 annual reduction on April 1st represent definite improvements upon those now effective. New annual and seasonal general service rates are to be filed which reduce the first block of the energy charge under these rates from 100 to 80 hours' use of the active load. This change will permit customer shifts from the power to the general service rates with savings of $418, annually, while the savings of customers now served under the general service rates will amount to $5,943, a total of $6,361 annually. No increases will be involved, while, on the basis of actual consumption in 1939, 38 per cent of the billings of customers affected, covering 44 per cent of the kilowatt hours sold, will be reduced, the balance remaining unchanged.

The greatest change provided for is in the rates for annual and seasonal domestic service. During the investigation the Commission has sought a cut in the first block of energy sold under these rates. This suggestion has been adopted by the company. Instead of a first block of 30 kilowatt-hours monthly at 8 cents and a minimum charge of $1, the new rate pro-

vides for the sale of 12 kilowatt hours for $1, the monthly minimum charge, with the next 18 kilowatt hours monthly priced at 6 cents each, and the balance of the rate as it now is. All domestic customers except minimum users will enjoy savings. This reduction reaches its maximum of 32 cents monthly at 30 kilowatt hours, where the charge will be $2.08, instead of $2.40, with this reduction continuing at the same level for larger use. This will be the lowest rate for such service in the state and will compare favorably with rates for domestic service generally throughout New England. Calculated on 1939 consumption the total annual savings to be effected under this change will be $23,585.

It may be noted that no change in the charges for street lighting in the city of Concord is contemplated within the proposal now before us. Although the Commission's investigation embraced this service and the Commission's rate engineer introduced trial rates at lower levels than those charged, there has been no indication of interest on the part of the city government, which has not been represented at the hearings at any time.

Of even greater potential importance than the immediate reduction of rates, in the opinion of the Commission, is the provision made for incentive to increased operating efficiency and for the automatic reduction of rates to insure the public reasonable participation in savings effected thereby without any of the delay, expense, and uncertainty which now characterize rate litigation. While this arrangement, which has been described in detail earlier in this report, is in some measure experimental, we are of the opinion that it affords real opportunities for substantial advantages to both the public and the company, and we shall follow closely developments thereunder.

Conclusion

For the reasons already set forth, we are of the opinion that, in view of the undertakings of the company for the next five years, discontinuance and dismissal of the investigation at this time will be in the public interest, and that the new rates proposed and filed should be permitted to become effective without delay as of April 1, 1940. Our order will issue accordingly.

Barry and Swain, Commissioners, concur.

Re Cooperative Delivery Service, Limited

[Decision No. 32791, Application No. 22429.]

Rates, § 425.1 — Motor carriers — Minimum — Exception.

1. No finding can be made that auto truck rates less than established minimum rates are reasonable where there is an absence of information relative to the estimated cost of transporting the traffic involved and a lack of substantial evidence to indicate that the rates in question have been and may be expected to be compensatory, p. 192.

Rates, § 425.1 — Auto trucks — Minimum Exception.

2. The Commission may not authorize an auto truck carrier to perform transportation at less than the established minimum rates where no finding can be made that the lower rates are reasonable, p. 192.

[February 6, 1940.]

APPLICATION *by auto truck operator for permission to charge less than minimum rates; denied.*

APPEARANCES: Laurence Berger, for applicant; Irving Bekey, for applicant; L. A. Bey, for the William Volker Co., interested party; John J. Williams, for Williams Transfer Company, interested party; Lawrence Price, for Chief Delivery Service, interested party; Ben Fullman, for Morden Delivery Service and City Messenger Express, interested party; E. L. H. Bissinger and F. F. Willey, for Pacific Electric Railway Company, as its interests may appear.

By the COMMISSION: By Decision No. 31597 of December 27, 1938, in this proceeding, the Commission authorized Cooperative Delivery Service, Ltd., a corporation operating as a city carrier and a highway contract carrier, to charge less than established minimum rates for the transportation of property for William Volker Co. within the Los Angeles drayage area.[1] The reduced rates were approved for a one year's period upon allegations that the routed and scheduled transportation service performed by Cooperative Delivery Service, Ltd., was of a specialized nature for which the established minimum rates were not entirely appropriate; that in a serv-

[1] The "Los Angeles drayage area" referred to herein is the area within which minimum rates were established by Decision No. 31473 of November 25, 1938, as amended, in Case No. 4121. Rates established by this decision were canceled and superseded effective January 1, 1940, by those established in and by Decision No. 32504 of October 24, 1939, as amended, in the same proceeding. Except as herein explained, the changes do not materially affect this application.

ice of this nature economies were possible which would permit profitable operations at rates lower than those required for ordinary drayage; and that the shipper involved had definitely decided to expand its proprietary operations if applicant were required to assess the established minimum rates and abide by the governing rules and regulations.

By the terms of said Decision No. 31597, as amended, the present authority will expire with February 29, 1940, unless sooner canceled, changed or extended by the Commission.[2] Applicant now seeks, by supplemental application, to have the authority extended to December 27, 1940. It alleges that conditions have not materially changed since granting of the original authority, and that the shipper has advised that it will be unable to operate under the established minimum rates.

Public hearing on the supplemental application was had before Examiner Bryant at Los Angeles, and the matter is now ready for decision.

The traffic manager of William Volker Co. testified that as a result of tests made of shipments moving during the months of January and February, 1939, he had determined that had certain "unit rates" (which became effective January 1, 1940) been applied to all shipments transported for William Volker Co. by applicant during that period, the resulting charges would have been substantially higher than those which would have resulted under the established rates then in effect under Decision No. 31473, *supra*.[3] He stated that he had not had an opportunity to make an adequate comparison with the rates now being applied under applicant's temporary authority, but said that a partial check of one week's business in September, 1939, indicated that application of the new unit rates would have produced charges some 38 per cent higher than those now being assessed. He testified that his company owned and operated two motor trucks at the present time, and that Cooperative Delivery Service, Ltd., transported all shipments within the Los Angeles drayage area which were not handled by these vehicles. The witness stated that unless applicant were permitted to maintain the present reduced rates, William Volker Co. would expand its proprietary operations in order to minimize its transportation costs. He explained that his company sold its products on a narrow margin of profit in active competition with other manufacturers, some of whom operated their own trucking equipment. He added that applicant had satisfactorily served his company for a number of years, and that he was desirous of continuing to use its services provided he could do so at the present reduced rates.

The president of Cooperative Delivery Service, Ltd., briefly described applicant's method of operation. It appears that applicant utilizes a total of 43 trucks in rendering a routed and

[2] The authority was originally scheduled to expire with December 27, 1939, but, by Decision No. 32664 of December 19, 1939, it was extended to February 29, 1940, in order that carrier and shipper might suffer no hardship pending a full consideration of the present record by the Commission.

[3] The unit rates referred to are those named in Item No. 410 of Appendix "A" to Decision No. 32504, *supra*.

scheduled parcel delivery service for a large number of shippers. All shipments are brought to applicant's terminal for segregation, and are thereafter distributed over 27 delivery routes. The witness had no information as to the total tonnage handled for all shippers, the total tonnage handled for William Volker Company, or the percentage relationship which the Volker traffic bore to the total.

He anticipated that unless the present rates were continued in effect a substantial portion of the William Volker traffic would be diverted to proprietary vehicles, and that his company would be unable to offset the resulting loss in revenue by a compensating reduction in the overhead cost of operation. He declared that his company had lost the tonnage of a number of other shippers in recent years, and could ill afford to lose the traffic involved in this application.

The witness testified that in his opinion the William Volker traffic was relatively economical to transport, due to properly arranged loading facilities at the shipper's place of business, convenient size and weight of packages, volume of tonnage, and absence of traffic congestion between shipper's plant, and applicant's terminal. He stated that he had no doubt that the traffic of William Volker Co. was compensatory, although he had made no calculations to establish this fact and had never attempted to estimate the revenue return on this particular operation.[4]

He stated that the average revenue from this shipper had approximated $475 per month, and said that for a year's period the reduced rates in question had returned some 35 per cent more revenue than accrued under rates previously assessed, while the estimated revenue under established minimum rates would have been approximately 27 per cent higher than that received.

A number of other carriers appeared and participated in the cross-examination of witnesses, but no one specifically opposed the granting of this application.

From a consideration of the evidence offered in this proceeding it will be seen that there is nothing in the record to show that the reduced rates which applicant seeks to continue in effect are reasonable or compensatory. Summarized, it may be said that the record shows only that the rates in question are higher than those assessed William Volker Co. prior to fixation of minimum rates by this Commission, and lower than those now established as minimum for other carriers and shippers; that unless applicant is permitted to continue its present rate, the shipper will expand its proprietary operations; that in some respects the William Volker traffic is more economical to handle than the average; and that as to this particular traffic the unit rates which became effective January 1, 1940, did not result in a reduction under the established class rates.

The rates which applicant has been assessing on the traffic of William Volker Co. and which it is here seeking authority to continue until De-

[4] He explained that in his opinion it would be impossible to segregate all of the expenses chargeable to the traffic of any shipper.

cember 27, 1940, are substantially lower than those applied by applicant to its other shippers.[5] Although the reduced rates have been in effect under temporary authority for more than a year, applicant has apparently made no attempt to determine whether or not they have in fact been fully compensatory.

[1, 2] In view of the total absence of information relative to the estimated cost of transporting the traffic here involved, and the complete lack of any substantial evidence to indicate that the rates in question have been and may be expected to continue to be compensatory, the Commission is obviously unable to make a finding that the rates are reasonable. Without such a finding it may not authorize applicant to perform transportation at less than the established minimum rates. (Section 10, City Carriers' Act; and Section 11, Highway Carriers' Act.)

Upon consideration of all the facts and circumstances of record, the Commission is of the opinion that the proposed rates have not been shown to be reasonable or compensatory. The supplemental application, except to the extent that it has heretofore been granted, will be denied.

ORDER

This proceeding having been duly heard and submitted, full consideration of the matters and things involved having been had, and the Commission now being fully advised,

It is hereby *ordered* that the supplemental application filed in this proceeding on November 15, 1939, except to the extent that it has heretofore been granted, be and it is hereby denied.

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[5] The traffic involved in this application consists entirely of shipments weighing from 100 to 500 pounds. (The record shows that applicant has assessed and collected the established minimum rates and charges on shipments of 100 pounds or less, and 500 pounds or more.) The relief rate on this traffic is 15 cents per 100 pounds, while the comparable established rates applied by applicant to its other shippers are from 19 cents to 29 cents per 100 pounds.

60-cell Exide-Chloride control battery in the services of a well-known Kansas utility company.

ENGINEERS TURN CONFIDENTLY TO EXIDE-CHLORIDES

THE widespread use of Exide-Chloride Batteries in public utility and private industrial plants can be explained in one word — confidence.

For the men who design, as well as those who operate modern power stations, have long since learned that the Exide-Chloride is absolutely trustworthy.

They are keenly aware of the fact that the construction of this battery is unlike that of ordinary batteries . . . that its remarkable Manchester positive plates — introduced nearly fifty years ago — have contributed much to its long life and ease of maintenance. As a result, they turn confidently to Exide-Chloride whenever a dependable source of power is needed for control bus, emergency lighting, or other exacting service.

Don't overlook this time-tried battery whenever you have need for reliable storage battery power. A letter or post card will bring you complete details.

Exide
CHLORIDE
BATTERIES

THE ELECTRIC STORAGE BATTERY COMPANY

The World's Largest Manufacturers of Storage Batteries for Every Purpose

PHILADELPHIA

Exide Batteries of Canada, Limited, Toronto

Industrial Progress

Selected information about manufacturers, new products, and new methods. Also news on personnel changes, recent and coming events.

More Trolley Coaches Ordered For Milwaukee Transport

WITH 124 trolley coaches now in operation, the Milwaukee Electric Railway and Transport Company is obtaining an additional 55 coaches. Delivery of the new equipment will start in September. The new units will replace street cars on the 8th-Muskego line, with eight one-way route miles, including a half-mile extension at the north end of the present line.

The Pullman Standard Car and Manufacturing Co. will provide the new trolley coaches. Thirty-five of the units will be equipped with the General Electric compound motor and Type MRC control, following successful operating experience of some 14 months with a sample equipment. All 55 of the coaches will have G-E 2-horsepower auxiliary motors, and five of them will be equipped with the G-E Type CP-37 compressor.

Natural Gas Sales Boosted By Industrial Expansion

OVER $300,000,000 worth of new industrial construction, as well as the employment of 85,000 new workers, has been brought about in the past five years by the influx of new industrial enterprise into, and the expansion of existing industries within, natural gas territories representing half of the natural gas industry. This expansion was described by Elmer F. Schmidt, vice-president, Lone Star Gas Co., Dallas, Texas, and chairman of the Natural Gas Section of the American Gas Association, in an address before the recent Natural Gas Convention of that Association in Houston, Texas.

These estimates, compiled by the A.G.A. Industrial Gas Section, on the basis of 32 replies to questionnaires addressed to top executives of natural gas utilities, also indicated that the expanding availability of natural gas is exerting a powerful influence upon the geographical distribution of, the expansion of, and the employment of labor by American industry; and that roughly 2,000 new plants and 2,400 significant expansions of existing plants have been made since 1934 in the 55 per cent of the natural-gas-supplied territories covered by the reports received. The area in point embraces 18,000,000 population and includes over 4,000,000 natural gas meters. Largely, it is Southern and Southwestern—although important natural gas cities in other sections, such as Detroit and Pittsburgh, also responded to the survey.

Assuming that other natural gas territories have enjoyed similar experiences, we can state that new industry, industry involving large-scale construction and employment, has accounted for over 100 billion cubic feet of the 244 billion cubic feet of natural gas which is being sold per annum to industry today over and above the 1934 pace.

Largest Sodium Lighting System for New York

INSTALLATION of the world's largest and longest sodium lighting system, according to General Electric engineers, has been started in New York under supervision of Nicholas J. Kelly, chief engineer of light and power in the city's Department of Water Supply, Gas and Electricity.

Over 2200 golden lights are being installed along the 33 mile Belt Parkway, and will run from Owl's Head Park in Brooklyn to the Bronx-Whitestone Bridge in Queens. They will be turned on officially for the first time on June 29th, when the Belt Parkway will be officially dedicated.

The Belt Parkway system will be almost twice as long as the present world's longest sodium lighting, on 18 miles of Route 7, outside Schenectady, N. Y. It will employ twice as many sodium lights as now used in the present world's largest system which operates over 1000 sodium lights on the San Francisco-Oakland Bay bridge.

Utilities Advertising Program

THE Public Utilities Advertising Association's annual convention will be held in conjunction with the thirty-sixth annual convention of the Advertising Federation of America at Chicago, June 23rd to 27th, according to an announcement by E. Keith Hartzell, president of the public utility group, and advertising manager of East Tennessee Light & Power Company.

Speakers will include E. J. Doyle, president of Commonwealth Edison Company of Chicago; R. W. Queen-Hughes, assistant manager of publicity, Winnipeg Electric Company, Winnipeg, Canada; N. W. Shefferman, Sears-Roebuck Company, Chicago; Miss Ada Bessie Swan, director, home service center, *Woman's Home Companion*, New York; C. W. Kellogg, president, Edison Electric Institute, New York, and Prof. Clyde Bedell, Northwestern University, Evanston.

Gas Utility Revenues Gain During First Quarter

MANUFACTURED and natural gas utility revenues amounted to $271,625,400 for the first three months of 1940, as compared with $246,812,800 for the corresponding period of 1939, an increase of 10.1 per cent, according to Paul Ryan, Chief Statistician of the American Gas Association.

The manufactured gas industry reported revenues of $104,932,500 for the first quarter, an increase of 6.6 per cent from the same period of the preceding year. The natural gas utilities reported revenues of $166,692,900, or 12.3 per cent more than for the first three months of 1939.

Total sales of manufactured gas for the first quarter were 111,700,700,000 cubic feet, an increase of 11.0 per cent. Natural gas utility sales for the period amounted to 444,499,500,000 cubic feet, an increase of 12.4 per cent.

Manufactured gas sales for domestic uses, such as cooking, water heating, refrigeration, etc. were 3.9 per cent above the same period of 1939. Sales for house heating purposes gained 25.0 per cent, commercial uses gained 7.2 per cent and industrial uses increased 18.2 per cent.

Natural gas sales for domestic purposes showed an increase of 14.7 per cent while industrial sales gained 13.2 per cent.

Dodge Truck Shipments Set All-Time Record

SHIPMENTS of Dodge Job-Rated trucks for the first quarter of this year were the largest for any similar period in the history of the company, according to T. W. Moss, director of Dodge truck sales.

Shipments in this period represented a 34.3 per cent increase over shipments in the corresponding quarter of 1939, and were 12 per cent greater than the next highest first quarter, which was in 1936.

Westinghouse Substation Meets Modern Requirements

A WESTINGHOUSE completely self-protecting substation, recently purchased by the Ohio Public Service Company, was installed at a cost of 16 per cent under the estimated cost of a substation of the conventional type with open steel bus structure and assembled equipment. Building the transformer, construction of two 2.4-kv feeders and five miles of 24-kv supply line and installation of the new unit, including placing it in regular operation was completed in 70 working days.

The CSP power transformer, introduced only two years ago by Westinghouse as a completely self-protecting substation in one tank, reasonably portable, was put to a slightly different use last year in Mansfield, Ohio. There the Ohio Public Service Company needed a compact economical way of supplying two independent low-voltage loads in a new high-school and a residential district. The transformer, rated 2000-kva self-cooled, is arranged so that either low voltage breaker and the regulator can be disconnected, bypassed, and grounded for maintenance or inspection without deenergizing the transformer or dropping the load.

AGAEM Convention Studies Current Gas Problems

THE fifth annual convention of the Association of Gas Appliance and Equipment Manufacturers held recently in French Lick Springs, Indiana, enjoyed an attendance greater than that of any previous convention.

The three-day program was outstanding in that no "outside" speakers were included and discussions centered exclusively around issues vital to the gas appliance industry in particular and the gas industry in general.

The principal session of the convention was held on the second day with President Frank H. Adams, vice-president of the Surface Combustion Corp., presiding. The speakers were N. T. Sellman, assistant vice-president, Consolidated Edison Company of New York, Inc., and chairman of the American Gas Association's Laboratories Managing Committee; Louis Ruthenburg, president of Servel, Inc., and W. C. Beckjord, president of the American Gas Association, and vice-president, Columbia Gas and Electric Corp.

Mr. Sellman declared that the gas industry stands out from other industries in that it polices itself. He said that the gas appliance manufacturers and utilities have in the American Gas Association's Laboratory structure a means of self-regulation in all utilization matters that should preclude all necessity for outside interference. He pointed out that if the rate of progress made in the past fifteen years can be maintained, the industry will make gas the ideal fuel of tomorrow.

Speaking on "Industrial Relations," Mr. Ruthenburg said that higher wages, shorter

hours and production restrictions without increases in efficiency will reduce American living standards. He stated that though the objective of the more abundant life is universally applauded, methods which are now attempted will not only fail to accomplish the objective but will of necessity defeat its attainment and inevitably bring about reduced living standards.

Mr. Beckjord said that the gas industry needs to tell its story more dramatically and comprehensively to the American public and the logical way is through increased localized newspaper advertising to supplement current national advertising.

A far-reaching sales promotion program for "CP" (Certified Performance) Gas Ranges to extend into 1941 and 1942 as well as for the remainder of this year was approved during the convention by the "CP" Sales Management Committee.

An important phase of the convention was the series of divisional meetings held on the afternoon of the second day, when promotional plans for the sale of major gas appliances and equipment were discussed.

The divisions and the chairmen were as follows:—

Domestic Gas Range, W. E. Derwent, vice-president, Geo. D. Roper Corp., Rockford, Ill.; Gas Water Heater Division, L. R. Mendelson, president, Hotstream Heater Co., Cleveland, Ohio; Gas House Heating and Air-Conditioning Equipment Division, W. L. Seelbach, secretary, The Forest City Foundries Co., Cleveland, Ohio; Direct Heating Equipment Division, E. C. Adams, president, Adams Brothers Manufacturing Co., Pittsburgh, Pa.; Gas Valve and Fittings Division, R. L. O'Brien, president, Detroit Brass and Malleable Works, Detroit, Mich.; Thermostatic Control and Accessories Division, W. A. Lean, general sales manager, The Wilcolator Co., Newark, N. J., and the Industrial Gas Equipment Division, F. J. Fieser, of Fieser-Lundt, Inc., New York, N. Y.

Two Engineering Laboratories Opened by Chrysler

CHRYSLER Corporation recently celebrated its 15th anniversary by opening two new engineering and research buildings at Highland Park, Michigan. Employing the finest facilities available, it is said that these buildings will comprise one of the world's great scientific establishments.

In opening these two buildings the Corporation has added to its already extensive facilities, 162,000 square feet of floor space devoted to engineering and research. This almost doubles its previous engineering equipment. In these new buildings are 94 laboratories, offices and test rooms for practically every conceivable scientific use.

According to K. T. Keller, president of the Corporation, the important thing about these new laboratories is not what you see. They are built to give free rein to the creative imagination of Chrysler Corporation engineers. To give them the best possible facilities to look ahead five, ten, fifteen years and develop the kind of fundamental automobile improvements for which the Corporation is known.

In the interest of creating better products Chrysler Corporation has spent more than 57 million dollars in engineering and product development during the past 15 years and these new facilities, dedicated to "new worlds in engineering" and designed to extend the range of human perceptions beyond the normal gifts of sight, hearing, touch, taste, and smell, are its pledge to the motoring public that progress is on the march in the automobile industry.

Columbia Gas & Electric Plans New Pipe Lines

THE construction of additional gas pipelines from West Virginia to New York State is planned by the Columbia Gas & Electric Corporation. According to a recent announcement, the new program will require an outlay of $1,787,255.

The new pipeline, paralleling and supplementing existing equipment, will enable three Columbia subsidiaries—Home Gas Co., Binghampton Gas Works and Keystone Gas Co., Inc., in New York—to obtain additional gas estimated at 2,500,000 mcf annually from United Fuel Gas Co., another Columbia subsidiary with producing properties in West Virginia.

Truck Sales Increase

A TOTAL of 48,509 truck sales reported by Chevrolet dealers for the first quarter of 1940, a gain of 3,970 units over the same period last year, was the basis for a reaffirmation of confidence in the present business outlook by William E. Holler, general sales manager.

The importance of truck sales as a means of analyzing the business outlook is generally recognized, Mr. Holler asserted. The strong showing made by Chevrolet dealers in the first quarter of the year, plus the indications of an upward trend as truck buyers begin renovating their fleets for spring and summer work, indicates beyond question that business has confidence in the immediate outlook.

Considers $4½ Million Plant

PLANS for the construction of a $4,500,000 High Bridge power station addition in St. Paul are being considered by the Northern States Power Company, according to a recent announcement.

Dictograph Intercommunicating Equipment being used by Customer Contact Clerk in securing credit verification from History records. Loud Speaking Equipment allows both hands of History Clerk free for handling necessary records while relaying information.

IMPROVE YOUR *CUSTOMER CONTACTS*

How *rapidly* can your Contact Clerks take care of service applications . . . bill questions . . . complaints?
How satisfactorily to your customer? . . . Do your transactions pass the "peak load test"?

Unless your Company has a perfect score on these questions you will want to know more about the Dictograph Customer Contact System.

Specially designed Dictograph Intercommunicating Equipment for Contact Clerks provides instant entree to Credit, Meter Records, Service and Unit book information. Green and red signals bring back Credit approval or rejection,—swiftly . . . silently! *Loud speaking* Dictographs for Credit and Service Clerks permit use of *both hands* for record references, enabling personnel to check records speedily and accurately during peak periods.

Existing record facilities can be linked up to centralized Customer Contact Clerks by means of Dictograph. Applications, Duplicate Bills, Comparative Readings, High Bill Complaints, Discounts, etc., can be efficiently and speedily handled.

May we have our Special Utility Representative call to discuss your problem with you . . . . no obligation.

DICTOGRAPH SALES CORPORATION
580 Fifth Avenue, New York

The oil makes and keeps the gear train extremely sensitive and accurate . . . minimizes wear . . . prevents corrosion and electrolytic action . . . protects against deposits of foreign matter. • Like all other Trident features, old and new, the Oil-Enclosed Gear Train is interchangeable on all types of Tridents now in service.

• ***The Oil-Enclosed Gear Train marked another Neptune pioneering step-forward in the improvement of the modern water meter.***

Straight Facts from crooked pipes

Westinghouse activities in research, in the manufacture, distribution and application of apparatus, and in promoting the use of electricity, result in better service to you and a wider use of electricity by your customers. They have been made possible and are continually encouraged by your purchases of Westinghouse apparatus.

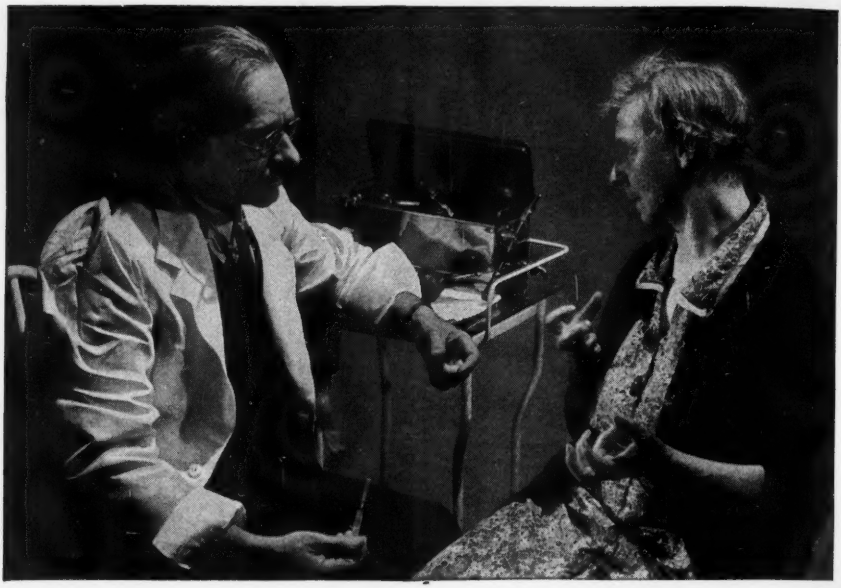
SMALL scale testing in Westinghouse laboratories often reveals hidden secrets that prove helpful in bringing about new economies in the operation of steam powered generating units. Above you see an engineer testing the effects of turbine steam pipe expansion caused by temperature increases. Complicated shapes and branch lines can be added as desired, and the resulting changes determined in fraction of time and with more accuracy than with equation and slide rule. Thus Westinghouse is ever on the alert, both to help you supply electricity more economically and to give you new ways of adding profitable load.

WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, EAST PITTSBURGH, PA.

Tune in "Musical Americana," N. B. C. Blue Network, every Thursday evening.

Westinghouse

ELECTRICAL PARTNER OF THE CENTRAL STATION INDUSTRY



Make it snappy, Sister!

THIS DOCTOR can't sit listening to your tale of woe. He's not a private physician.

He works for the government, not you. You're just one of the people assigned to him by the political overseer. Ten more of you are in the waiting room, with twenty or thirty to come.

You can't expect time and sympathy under conditions like that.

So snap into it, comrade! Briefly now, what seems to be the trouble?

★ ★ ★ ★ ★

That's socialized medicine, run by politicians and paid for by payroll taxes.

Compare it with the traditional American system of private medicine, in which the individual freely selects and consults the doctor in an atmosphere of intimate and friendly confidence.

Private medicine has done a magnificent work. Our average life expectancy is the highest in the world. Serious diseases are under increasing control. Infant and maternal mortality rates are lower than ever.

But this does not interest those who want to set up socialized medicine. Law after law is presented to the U. S. Congress and State Assemblies to put the relations between doctors and patients under political control.

Unless Americans want to sign up for all time they should reject these Government Health legislative proposals flatly, without delay.

This message is published by

NATION'S BUSINESS

It is the 42nd of a series contributed to a better understanding of free American enterprise. Regardless of your political affiliations, if you have a point of view you would like to express on developments now shaping in the field of public policy relative to the medical profession, why not write to your Congressman and Senator?

PROFESSIONAL DIRECTORY

• This Directory is reserved for engineers, accountants, rate experts, consultants and others equipped to serve utilities in all matters relating to rate questions, appraisals, valuations, special reports, investigations, financing, design and construction.

PROFESSIONAL DIRECTORY (continued)

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PROFESSIONAL DIRECTORY *(concluded)*

INDEX TO ADVERTISERS

[The Fortnightly lists below the advertisers in this issue for ready reference. Their products and services cover a wide range of utility needs.]

*Fortnightly advertisers not in this issue.

Public Utilities

FORTNIGHTLY

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Including the Issues of January 4, 1940 to June 20, 1940

PUBLIC UTILITIES REPORTS, INC.
WASHINGTON, D. C.

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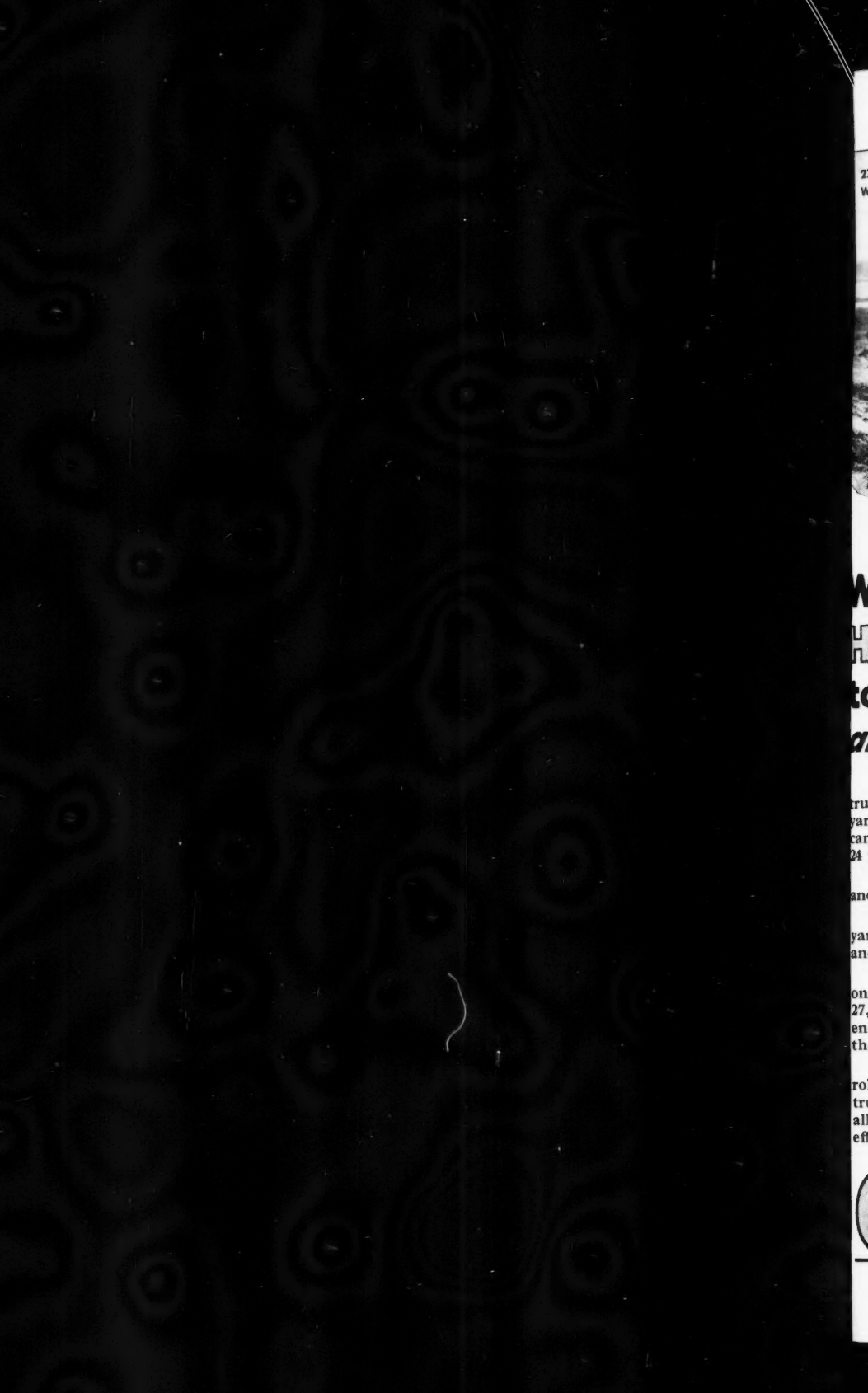
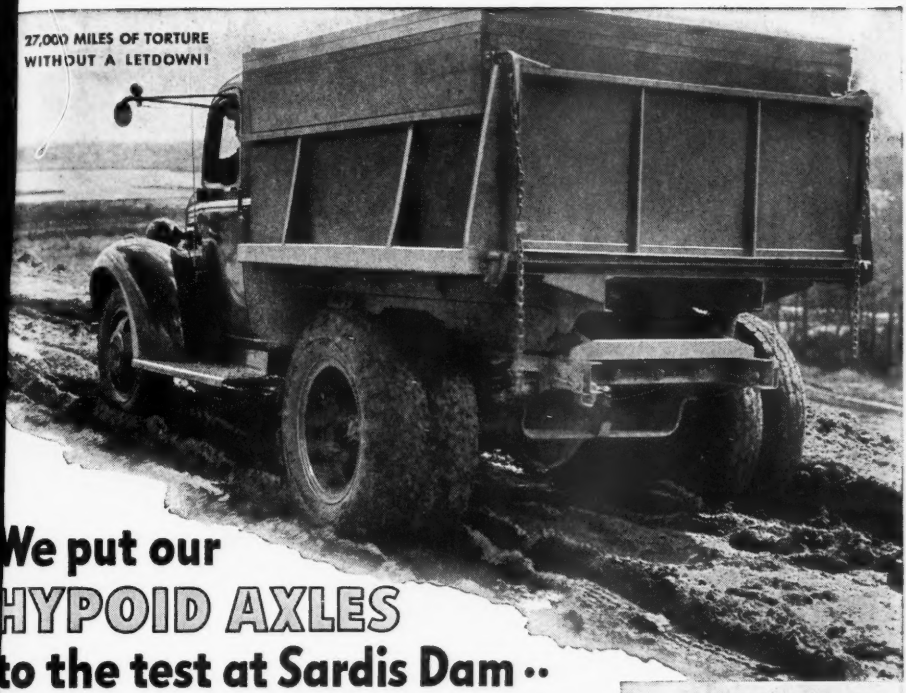
(This section of the magazine, which comprises the decisions, orders, and recommendations of courts and commissions, is too voluminous to be included in this index. These reports are published annually in their entirety, in five bound volumes, together with the Annual Digest; copies may be obtained from the publishers, PUBLIC UTILITIES REPORTS, INC., *Munsey Building, Washington, D. C., upon application.)*

Subject Index





We put our HYPOID AXLES to the test at Sardis Dam ·· *and look what happened!*

Down in Mississippi, at the Sardis Dam, Chevrolet found a truck proving ground that was death on rear axles. Millions of yards of gravel had to be moved, and moved fast. Trucks were carrying six-ton loads over a rutted road, up a quarter-mile 24 per cent grade.

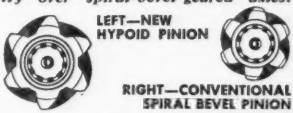
No truck can take that kind of punishment indefinitely—and rear axles suffered a high mortality.

Chevrolet engineers eagerly accepted the challenge. They yanked the bevel gear axles out of two 1939 Heavy Duty trucks, and installed Chevrolet's new 1940 hypoid-gear rear axles.

What happened? Conventional axles were having trouble on an average of every 7,725 miles—but these 1940 hypoids did 27,000 miles without a failure. That was proof enough for our engineers. They brought those axles to Detroit, and found them still good for more thousands of miles.

Few trucks have to take such a beating as these two Chevrolet trucks took. But Chevrolet engineering demands that its trucks shall have extraordinary reserve strength. So—today—all new 1940 Chevrolet trucks have this vastly stronger, more efficient, and longer-lived rear axle. Hypoid means low costs.

From the gravel pit to Sardis Dam are ten miles of rough going and steep grades. Here Chevrolet's 1940 hypoid-gear rear axles proved their superiority over spiral-bevel-geared axles.



These two drive pinions fit the same size ring gear—yet the hypoid pinion is 53.6% heavier, and has 37% greater tooth contact and 20% lower tooth pressure.

CHEVROLET MOTOR DIVISION
General Motors Sales Corporation
DETROIT, MICHIGAN

CHEVROLET TRUCKS

Sequel to the Broken Mirror

ALMOST twenty years ago to a day, Charles Proteus Steinmetz entered his little summer shack on the bank of the Mohawk River to find mute evidence of the violent intruder—lightning. It didn't take him long to identify the culprit. And he didn't wait a minute before he set about what has since become an unending study of lightning's characteristics—particularly its effect on the operation of electric power systems.

The names of Steinmetz and Peek during the early twenties, and McEachron, Lewis, and Foust more recently, have been associated in our industry with practically every major achievement in lightning investigation. The work of the latter group, in adapting, in 1928, the cathode-ray oscillograph to the measurement of lightning enabled the first recording, in Pennsylvania, of a direct stroke on a transmission line. Their efforts in developing the surge-voltage recorde surge-crest ammeter, and high-speed photography have made it possible to record the amperag and characteristics of as many as 734 direc strokes on transmission lines *in one year;* t measure and analyze as many as 42 direct hit on the Empire State Building during one lightnin season.

The sequel to the broken mirror is a story o continual investigation—a planned G-E researc program that each year adds some new knowl edge to a rich fund which has been largely re sponsible for the success to date in making elec tric service immune to lightning. These accom plishments are in one way or another reflecte in the design and performance of practically every G-E product you buy.

GENERAL ELECTRIC

300-7B